IN THE UNITED STATES DISTRICT COURT

IN AND FOR THE DISTRICT OF DELAWARE

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MOTOROLA, INC., CISCO SYSTEMS, INC., SCIENTIFIC-ATLANTIA, INC., ARRIS GROUP, INC., THOMSON, INC., AMBIT MICROSYSTEMS, INC., and NETGEAR, INC.,

Plaintiffs,

v.

REMBRANDT TECHNOLOGIES, LP, REMBRANDT TECHNOLOGIES, LLC, d/b/a REMSTREAM,

Defendants.

: Civil Action

: No. 07-752-GMS

- - -

REMBRANDT TECHNOLOGIES, LP, and REMBRANDT TECHNOLOGIES, LLC, d/b/a REMSTREAM,

Counter-Plaintiffs,

v.

MOTOROLA, INC., CISCO SYSTEMS, INC., SCIENTIFIC-ATLANTIA, INC., ARRIS GROUP, INC.,

(Caption Continues on Page 2)

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Wilmington, Delaware
Wednesday, August 6, 2008
9:10 a.m.

- - -

BEFORE: HONORABLE GREGORY M. SLEET, Chief Judge

THOMSON, INC., AMBIT MICROSYSTEMS, INC., NETGEAR, INC., TIME WARNER CABLE LLC, TIME WARNER NY CABLE LLC,

TIME WARNER ENTERTAINMENT-ADVANCE/NEWHOUSE PARTNERSHIP, TIME WARNER ENTERTAINMENT COMPANY, LP, COMCAST CORPORATION, COMCAST CABLE COMMUNICATIONS, LLC, COXCOM, INC., CSC HOLDINGS, INC., CABLEVISION SYSTEMS CORPORATION, ADELPHIA COMMUNICATIONS CORPORATION, CENTURI-TCI CALIFORNIA COMMUNICATIONS, LP, CENTURY-TCI HOLDINGS, LLC, COMCAST OF FLORIDA/PENNSYLVANIA, L.P.(f/k/a PARNASSOS, LP), ADELPHIA CONSOLIDATION, LLC, PARNASSOS HOLDINGS, LLC, WESTERN NY CABLEVISION, LP, SHARP CORPORATION and SHARP ELECTRONICS CORPORATION,

Counter-Defendants.

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:08:39 **THE COURT: Good morning. Please take your seats.**

:08:49 **Counsel, I think we have the place to ourselves today.**

:08:52 **Let's pick up where we left off.**

:08:56 **MR. DESMARAIS: Thank you, Your Honor.**

:08:58 **We have, Mr. Seitz and I have agreed, with Your Honor's permission, to essentially split the time today for the remaining time, so that we can finish.**

:09:11 **THE COURT: That works.**

:09:13 **MR. DESMARAIS: Where we were yesterday, we were talking about the '858 patent, which Your Honor will recall is a patent to the network access unit. That is a picture of it there in Figure 3. The idea being that you have packet sources and synchronous data sources in the same module connected to the bus. And then the unit interfaces with the network. And you can see in the background of the invention it talks about the network access unit messaging**

:09:41 **the flow of data between the local communications network**
:09:43 **and the network facility in both directions.**
:09:46 **We covered the first term yesterday, which was**
:09:48 **data communications apparatus. And I won't re-cover that**
:09:53 **ground. That is the network access unit.**
:10:04 **The first term was data communications**
:10:07 **equipment, networking access unit.**
:10:09 **The next two terms are bus and TDM bus across**
:10:13 **the top, which you see there across the top, it connects the**
:10:17 **packet modules and synchronous modules.**
:10:20 **So first we will talk about what is a bus and**
:10:22 **what is a TDM bus. You see bus in the claim. It is in all**
:10:26 **of the independent claims. If you look at the two**
:10:29 **constructions, it is our view that bus should get its**
:10:32 **ordinary meaning. The patent uses the term in its ordinary**
:10:35 **meaning, and its ordinary meaning is hardware lines --**
:10:40 **THE COURT: I am not trying to be flip, Mr.**
:10:42 **Desmarais. But yesterday I thought I heard you to say plain**
:10:46 **and ordinary meaning is no meaning. That is what I took.**
:10:50 **MR. DESMARAIS: Maybe I wasn't clear yesterday.**
:10:52 **What I meant to say was the plain and ordinary meaning that**
:10:57 **Rembrandt is proposing.**
:10:58 **THE COURT: Their plain and ordinary meaning.**
:11:02 **MR. DESMARAIS: Winds up being no meaning at**
:11:05 **all.**

:11:05 **THE COURT: I didn't know if you were offering**
:11:07 **that as a general precept, some read on Phillips or**
:11:10 **something. I am being a little facetious.**
:11:12 **Go ahead.**
:11:14 **MR. DESMARAIS: I think it is an important**
:11:16 **point. Let me clarify what I meant by that. Plain and**
:11:18 **ordinary meaning, of course, is an accepted methodology for**
:11:21 **patent claims.**
:11:22 **THE COURT: It is.**
:11:22 **MR. DESMARAIS: But what does it mean, plain and**
:11:25 **ordinary meaning? That is what I was trying to get at**
:11:28 **yesterday. When you look at what Rembrandt is proposing as**
:11:32 **plain and ordinary meaning, what they do to a term that**
:11:36 **means something to the patent, how it is being used in the**
:11:38 **patent, and they have broken it out and they say plain and**
:11:41 **ordinary meaning, and then that winds up being an expansion**
:11:44 **of what the claim was really trying to get at.**
:11:48 **So I wasn't taking issue with the doctrine that**
:11:50 **from time to time plain and ordinary meaning is the right**
:11:53 **approach.**
:11:53 **THE COURT: I really didn't think you were. I**
:11:56 **was just having a little fun.**
:12:00 **MR. DESMARAIS: In this case, bus is such a**
:12:03 **generic term. If you look in the dictionary, our definition**
:12:23 **comes right out of the dictionary. That is the way the**

:12:25 **patent uses the term. You look at Rembrandt's proposed**
:12:29 **construction, one or more -- this is a good example of what**
:12:33 **I was just saying. They take the words bus and they broaden**
:12:36 **it out to one or more conductors that are used as a path for**
:12:40 **transmitting information from any of several sources to any**
:12:43 **of several destinations.**
:12:45 **You look at that definition. They are calling**
:12:47 **that plain meaning. What that does is broaden out the term**
:12:52 **bus the way it is used in the patent to something that could**
:12:55 **cover anything connected to anything anywhere.**
:12:57 **That is the point I was trying to make. They**
:12:59 **are calling it plain meaning. Really, what it is is a**
:13:02 **dramatic expansion of what the patent is talking about.**
:13:05 **If we look at what bus actually means, you go to**
:13:08 **any dictionary, it says it's a set of hardware lines --**
:13:12 **wires -- used for data transfer among the components of a**
:13:15 **computer system.**
:13:16 **That is the ordinary meaning of bus.**
:13:19 **If you look at how the patent uses it, that is**
:13:21 **exactly how the patent uses it. You see it in Figure 3,**
:13:24 **where it is a wire connecting the different modules within a**
:13:28 **device, and they call it the bus. Then you look at the**
:13:31 **textual description at Column 3 and Column 8 -- I have blown**
:13:34 **it up here -- it is a wire connecting modules.**
:13:38 **The synchronous application modules couple**

:13:41 **synchronous data equipment note shown the telephone**
:13:44 **equipment, via the TDM bus as known in the art. Each of the**
:13:48 **plurality of packet application modules couple packet data**
:13:52 **equipment, a data terminal, to the TDM bus.**
:13:55 **So it is a wire connecting modules within a**
:13:58 **device. That is the way the patent uses it. That is the**
:14:01 **way the dictionary uses it.**
:14:02 **If we go to the next slide, this is the inventor**
:14:04 **himself testifying that that is what they meant when they**
:14:07 **use bus. They meant the back plane which interconnects the**
:14:11 **modules. We are advancing, bus is a generic term, we are**
:14:15 **using a dictionary, we are using it the way it is in the**
:14:20 **specification. We think it is appropriate. This is a**
:14:22 **particular type of bus, a TDM, or time division multiplexed**
:14:27 **bus. So that adds a layer of definition on top of bus. You**
:14:31 **can see the term used in Claim 1.**
:14:32 **THE COURT: Is the plaintiffs' proposal**
:14:34 **consistent with the specification?**
:14:37 **MR. DESMARAIS: For bus or TDM bus?**
:14:39 **THE COURT: For time division multiplexed bus.**
:14:43 **MR. DESMARAIS: Here they say, Rembrandt is**
:14:46 **proposing a bus having a bandwidth partitioned into a**
:14:50 **defined repeated sequence of time slots that is shared by**
:14:53 **two or more sources of data by limiting each source's**
:14:57 **transmission opportunities to discrete intervals of time.**

It is consistent. There is nothing that they say in there that is wrong. I think what they are missing, based on the way TDM -- in other words, it doesn't go far enough. The way TDM is used in the patent specification, they leave out the fact that in order for it to actually be a TDM bus it has to be repeating snapshots of time slots. In other words, there is a certain number of time slots and then they repeat.

The other thing they are leaving out is that -- and I think they agreed to this yesterday in their argument -- that any source, any one source can only use the bus at any one time.

If you look at, if I can show you, in their own tutorial yesterday, they showed you this picture. It was animated. What they showed is time slots traveling across the bus. And at any one snapshot of time, only one of those sources gets to put something on the bus. That is the whole point of it being time division, you are dividing the time between sources.

So when you go back to the proposed constructions, ours says that more clearly. It says, at the bottom there, "...whereby only one data source can successfully transmit over the bus at any one discrete interval of time."

That is the key concept of a time division

multiplexed bus. The way they have written theirs leaves open the opportunity for there to be more than one source transmitting in a discrete time slot at a particular time, although in their argument yesterday I thought I heard them agree when they were discussing that animation that only one source can use a bus at a particular point in time. So I think we have agreement based on their oral comments. If you look at the brief, the brief, I got the idea that they were changing that.

So I think we are very close, that what's missing from theirs is the said group of time slots repeat periodically. So, in other words, you might have 1 through 6 and then 1 through 6 then 1 through 6. It is not 1 through infinity. There is a repeating methodology to the bus.

THE COURT: You agree on that, the repeated sequence of time slots, don't you?

MR. DESMARAIS: Yes. But if you look at ours, see how it says on ours "a bus having a bandwidth partitioned into a repeating sequence of time slots defined to be used in the same way during the repetition."

So the way the bus is set up, you have slots 1 through 6 then 1 through 6 then 1 through 6. They have defined uses, and those uses repeat. That is the only way you can set it up in a system where you have different

:17:35 **sources trying to share the bus. There has to be a**
:17:38 **protocol. They leave that out of theirs and they leave out**
:17:41 **this point about -- or else they are not clear about one**
:17:45 **source at a time. That is really where the dispute was.**
:17:48 **If you look at the intrinsic evidence, I will go**
:17:52 **through it quickly, because I think the points are pretty**
:17:55 **clear. The bus described in this application has this**
:17:58 **bandwidth partition into a repeating sequence of time**
:18:01 **slots -- that is the key -- that can capture sole access.**
:18:06 **You can see this in Column 6. You can see it in Column 7.**
:18:10 **You capture the channel. "Once granted access, the packet**
:18:14 **application module has sole access to the multiple access**
:18:17 **packet channel for a period of time."**
:18:19 **And that concept is repeated throughout.**
:18:21 **You can see it, if you go to Slide 30, you can**
:18:24 **actually see the figure, where you see Frame 1, Frame 2,**
:18:27 **Frame 3 and Frame 4, and the meaning of those frames are**
:18:31 **repeated in those chunks over time.**
:18:34 **So then we can go to -- I am going to skip a**
:18:40 **couple terms, Your Honor, just in the interests of time.**
:18:42 **But you will see in the notebook that we have given you,**
:18:45 **there is an index to the terms. They are all grouped. So**
:18:48 **the slides are here with the intrinsic evidence that we**
:18:52 **would argue. But I think, for the purpose of argument, the**
:18:55 **themes will come out with the terms we have selected for**

:18:57 **argument.**

:18:59 **We will go to Slide 44, please.**

:19:10 **I am on Slide 45 now. The term that I would like to discuss is shown here in Claim 1, the "plurality of packet data sources coupled to the time division multiplexed bus that share the allotted bandwidth for transmitting packet data." So it is the concept of how do these different sources share the bus that I would like to talk about now.**

:19:33 **If you look at Rembrandt's proposed construction of this term, they disregard the key distinction over the prior art and the clear statements in the specification. Let me go through that, and we will come back to what their proposed construction is. If we look at the specification and what the patent was trying to do about how you share the bus -- and this is something we talked about a little bit already, in contrast to the prior art way of doing it -- TDM buses, by the way, have been around for a long time. They contrasted their method in the prosecution history and in the specification that the '858 patent is directed to a system where different sources share the single TDM channel and they do that by eliminating the central packet manager. And they couldn't have been more clear. It was in the prosecution history and the specification.**

:20:19 **What they say, in the prosecution history, "In**

:20:21 **particular, multiple packet data sources share a single TDM**
:20:25 **channel. As a result, no central packet manager is required**
:20:30 **to aggregate the packet data."**
:20:33 **This is Slide 47. This isn't a summary of**
:20:37 **invention section. "This invention provides the following**
:20:39 **advantages." The first one listed, no central packet**
:20:42 **manager is required. And then it goes on. And then in the**
:20:46 **detailed description: "In accordance with the inventive**
:20:48 **concept, multiple packet application modules now share a**
:20:53 **single TDM channel...packet manager is eliminated."**
:20:57 **They are trying to run away from those**
:20:58 **statements in the prosecution history with their proposed**
:21:01 **construction -- excuse me, in the specification, they are**
:21:04 **trying to run away from that with their proposed**
:21:06 **construction.**
:21:07 **It is all throughout the specification, this**
:21:09 **concept of sharing the same channel and eliminating the**
:21:12 **packet manager. We see in Column 2 and Column 4 that this**
:21:16 **system "allows the packet application modules on the TDM bus**
:21:20 **to share, and contend for, the entire TDM bandwidth**
:21:25 **allocated to packet data."**
:21:27 **What that means is, you have got this section of**
:21:29 **the bus that is going to be dedicated to packet data.**
:21:32 **Remember, this invention is, you are going to have packet**
:21:34 **data and synchronous data using this bus. The way they do**

it is they take a part of the bus and they dedicate that to the packet data sources. Then they have the different packet data sources trying to contend for who is going to get access to the packet part of the bus. When one of them gets access, they get the entire section of the bus for themselves. That is what the patent is telling us here.

In particular, this packet dedicated portion of the bandwidth is referred to as the multiple access packet channel. Again, it's shared among these sources trying to get onto the bus.

What the patent tells us is that, as I mentioned, when one of those packet data sources gets access to the bus, they get the full size of the packet part of the bus for the time they are transmitting before another one can transmit.

We see it again here at Column 5 and Column 6. "As described above, each packet application module must contend for the multiple access packet channel. If a packet application module grabs the multiple access packet channel that packet application module then transmits using the full 384 kilohertz of bandwidth."

That is one of the key concepts, and that is one of the concepts that is lacking from Rembrandt's proposal.

You can see it also in the figures. This is Figure 5, which is a good snapshot of what we are talking

about. Take Frame 1 across horizontally. That is the entire TDM bus. They divide it in this particular schematic down the middle. The left side is for packet sources. The right side is for synchronous sources.

So take just the left side, where you see that yellow. That left side of the bus is available for all of the packet sources to contend for. They have to fight over it. There is a protocol for getting access to it. As soon as one of them is granted access, they get the whole channel on the left there to send their packet, and then they have to contend again, and maybe another one will get it and they get the whole channel. That is how they are sharing the packet portion of the TDM bus. It is defined for them, and they have to fight for it. And when one of them gets it, they get the whole bandwidth of the packet source. That is what the invention was and the key distinction over the prior art.

If you look back at the constructions, you see these concepts missing from Rembrandt's.

Go back to Slide 46.

Our construction is, "without the need for a central packet manager" -- you recall, that was clearly enunciated in the specification -- "each packet data source treats the allotted bandwidth as a single channel by contending for use of the entire channel in which no time

:24:15 **slot is assigned to any particular packet data source."**

:24:18 **That captures both concepts of how they were**
:24:20 **distinguishing themselves over the prior art by having no**
:24:23 **packet manager, and by having them, the packet sources,**
:24:27 **contend for the bandwidth and the winner gets it all.**

:24:30 **Where if you look at Rembrandt's construction,**
:24:33 **they say, "more than one source of packet data that each use**
:24:36 **time slots that are allotted to packet data." That is no**
:24:39 **different from the prior art that the specification was**
:24:43 **saying that the invention was different from.**

:24:47 **Once again, this is the concept, the theme we**
:24:50 **were talking about. They are calling their definition plain**
:24:52 **meaning. What really they are doing is changing the**
:24:55 **meaning, broadening it out and getting away from what they**
:24:58 **actually invented here.**

:24:59 **THE COURT: Could you allow the possibility that**
:25:01 **there is no construction needed whatsoever of this**
:25:03 **particular term?**

:25:05 **MR. DESMARAIS: I think in this particular case**
:25:06 **you can't, because if you look at what happened in the**
:25:09 **specification, if you look at, say, Slide 47, they say under**
:25:17 **summary of the invention, "In particular, multiple packet**
:25:21 **data sources share a single TDM channel. As a result, no**
:25:25 **central packet manager is required to aggregate the packet**
:25:27 **data."**

:25:28 **"This invention provides the following**
:25:30 **advantages: no central packet manager is required," and**
:25:33 **they go on. They say that over and over again.**
:25:36 **So this is a situation where, in order to have**
:25:38 **an invention in the first place, they had to change what it**
:25:44 **means to be a TDM bus. They invented a particular kind of**
:25:47 **TDM bus. And if we don't construe it, then we will be**
:25:51 **arguing that to the jury, as to what it means, and**
:25:54 **essentially we will be having a Markman at the jury trial.**
:25:58 **If we go to Slide 52.**
:26:01 **I would like to talk now about distributed**
:26:03 **packet manager. It appears in Claim 1 and several of the**
:26:08 **other claims.**
:26:10 **If you look at the proposed constructions,**
:26:13 **again, we see the concept of what the distributed packet**
:26:18 **manager was, this was the solution for the prior art way of**
:26:21 **doing it, which is a central packet manager. So the patent**
:26:24 **said we are going to do it differently. We are going to**
:26:27 **eliminate the central packet manager and distribute the**
:26:30 **packet manager among the different modules. That is the**
:26:33 **term we are looking at now. What is this distributed packet**
:26:35 **manager?**
:26:37 **And again, Rembrandt leaves out the key**
:26:41 **inventive aspects of what this distributed manager is. They**
:26:45 **leave out the fact that it was to get away from the central**

:26:48 **packet manager. They leave out the key fact that the system**
:26:52 **can't work if the distributed packet manager is not talking**
:26:56 **to each other. That is how they decide who is going to get**
:26:59 **onto the TDM bus.**
:27:01 **And they leave out the concept that there is one**
:27:03 **at a time access to the bus. You see those points in our**
:27:08 **construction.**
:27:09 **Our construction comes right from the intrinsic**
:27:11 **evidence. This is what the invention was. If you look**
:27:15 **right in the claim language of Claim 1, it says, "this**
:27:19 **distributed packet manager allocates access to the allotted**
:27:24 **bandwidth among the different packet sources."**
:27:28 **So you have got the distributed packet manager**
:27:30 **coordinating with the distributed packet managers in the**
:27:33 **other modules, so that among them, when they talk, they can**
:27:37 **decide who is going to get onto the bus in the first**
:27:40 **instance.**
:27:41 **Rembrandt's construction has each distributed**
:27:46 **packet manager itself deciding whether to get on the bus,**
:27:48 **and that's totally different from what the invention is and**
:27:51 **what's described in the specification.**
:27:54 **Rembrandt's argument in their briefs that the**
:27:56 **distributed packet managers do not need to coordinate among**
:27:59 **themselves is contrary to the specification as well, not**
:28:02 **just the claims. If you look at Column 8, it says, very**

:28:06 **clearly, "To implement this slotted-access method" -- they**
:28:10 **are not saying one way to do it. They are saying to**
:28:13 **implement it -- "two additional signals are bussed between**
:28:16 **the packet application modules. It is assumed these signals**
:28:19 **are bussed among the packet application modules..."**
:28:23 **That is the point. The modules have to speak to**
:28:25 **each other to decide who is going to get on the bus to make**
:28:30 **use of this access of all of the bandwidth.**
:28:34 **The second concept that they leave out of the**
:28:36 **construction is this point that we made with respect to the**
:28:38 **earlier claim. The whole invention here was to distribute**
:28:41 **these packet managers, so you remove the central packet**
:28:46 **manager. If you look again in the summary of the invention,**
:28:49 **"As a result, no central packet manager is required to**
:28:52 **aggregate the packet data."**
:28:54 **Then they say, "...the packet manager is**
:28:56 **eliminated."**
:28:57 **These are the concepts that Rembrandt's alleged**
:29:03 **plain meaning construction essentially does away with. And**
:29:05 **it was, in fact, what the entire invention was about.**
:29:08 **If we go back to the competing constructions on**
:29:12 **Slide 54, they would have their construction be, "A device,**
:29:16 **process or algorithm located within each packet data source,**
:29:19 **that controls how the packet data source accesses the time**
:29:23 **division multiplexed bus."**

:29:25 **That totally leaves out the fact that there is**
:29:29 **no central packet manager and that they have to talk among**
:29:32 **themselves to even have the communication. It refers to the**
:29:36 **communication, but then ignores the central concept.**
:29:38 **When you look at ours, it comes right from the**
:29:41 **intrinsic evidence, which is, it is a "component within each**
:29:44 **packet data source" -- and we agree on that -- "that permits**
:29:48 **it to share the allotted bandwidth, without the need for**
:29:50 **centralized packet manager, by communicating with other**
:29:54 **packet data sources to control" which of these data sources**
:29:57 **can access the bandwidth. Again, it is right from the**
:30:04 **specification. It is right from the background of the**
:30:07 **invention. It is right from the summary of the invention.**
:30:09 **And it's required by the claims.**
:30:16 **The next two terms that I would like to treat**
:30:18 **together go to one of the key concepts in the patent, which**
:30:23 **is packet data and synchronous data. You see the terms are**
:30:29 **used in all the claims, packet data and synchronous data in**
:30:34 **Claim 7.**
:30:36 **If you look at the constructions, Rembrandt**
:30:40 **would propose constructions that do away, again, with the**
:30:45 **central concept here.**
:30:46 **What the concept here of this invention was was**
:30:50 **you would have a device that could deal with synchronous**
:30:55 **data, on the one hand, and packet data, on the other hand.**

:30:59 **What the distinction is that's pointed out in the**
:31:02 **specification is one collection of that data travels in**
:31:07 **packets, and one collection of that data doesn't travel in**
:31:11 **packets. That is the whole theme of the specification, how**
:31:15 **do we deal with packet data in a system where we also have**
:31:19 **data that is not packetized.**
:31:21 **If you look at their constructions, they do away**
:31:24 **with that concept entirely. They call packet data variable**
:31:28 **bit data and they call synchronous data constant bit rate**
:31:34 **data, totally eliminating the distinction that is clear on**
:31:37 **the face. One is called packet data and one is non-packet**
:31:40 **data. That is the concept they are trying to get around.**
:31:42 **In fact, yesterday in the argument Mr. Seitz**
:31:44 **said, well, synchronous data could also be packetized. That**
:31:48 **doesn't even make any sense. If synchronous data is**
:31:51 **packetized, then it is packet data, totally eliminating the**
:31:55 **distinction between packet data and synchronous data. That**
:31:58 **was his argument yesterday. He said you could have**
:32:01 **synchronous data that is packetized. But if you read the**
:32:04 **patent specification, they clearly say that you can't do**
:32:06 **that.**
:32:08 **If you look at Slide 65, I think it makes the**
:32:10 **point pretty clearly.**
:32:12 **In the network access unit that is described as**
:32:16 **part of the invention, they have four different modules.**

:32:18 **Two of them are packet application modules, and two of them**
:32:22 **are synchronous application modules. If Rembrandt's**
:32:26 **construction was correct that the synchronous application**
:32:28 **modules could also be packetized, then this entire invention**
:32:32 **doesn't make any sense, because the point of the invention**
:32:34 **was, how do you deal with synchronous data versus packet**
:32:37 **data in the different pieces of equipment. You see that**
:32:41 **right in the summary of the invention: "I have realized an**
:32:44 **alternative approach to the design of TDM-based equipment**
:32:47 **that supports both synchronous data and packet data."**
:32:52 **He is drawing a distinction between data that is**
:32:55 **packetized and data that isn't.**
:32:59 **If you look at Column 1, for example, the**
:33:01 **"support of synchronous data provides the ability to make**
:33:04 **telephone or voice calls, while the support of packet data**
:33:07 **provides the ability to interwork with public network packet**
:33:11 **services," again, drawing a distinction not between the bit**
:33:15 **rates. The bit rates have nothing to do with it. The**
:33:17 **distinction is, one is packetized and one is synchronous.**
:33:21 **That's the key distinction.**
:33:22 **Packetized data is packaged in an envelope**
:33:26 **called a packet. It goes through the system with a**
:33:28 **particular protocol. Synchronized data is just a steady**
:33:32 **stream of data that has no packets, no packaging, and you**
:33:35 **have to deal with those two things very differently in this**

:33:38 **equipment. That is why all through the specification, the**
:33:41 **inventors said, you have got packet data and you have got**
:33:45 **synchronous data.**
:33:49 **Then if you look at the deposition of the**
:33:51 **inventor, of course, he says that as well, "Circuit**
:33:53 **switching is data that flows through a circuit switch**
:33:58 **synchronously. Packet switching is packet data."**
:34:01 **Then if you look at the figures in the patent,**
:34:03 **it couldn't be more clear. Figure 5, one side is dedicated**
:34:07 **to packets. And you see packets traveling over the bus.**
:34:11 **The other side is just open time slots, no packetization.**
:34:15 **If you pull back and look at the description, they do say,**
:34:19 **Column 5 there, variable bit length. And Rembrandt seizes**
:34:25 **on the word variable bit and says packets are variable bit**
:34:30 **rates. That is doing away with the real distinction here.**
:34:32 **It says variable bit length packets. This allows a packet**
:34:36 **to be spread across time slots with multiple TDM frames.**
:34:39 **The issue being, the distinction is packet, not variable bit**
:34:43 **rate.**
:34:46 **In fact, if you look at the prosecution history,**
:34:49 **you can see the Patent Office had that understanding as**
:34:52 **well. When they rejected the invention over the prior art,**
:34:56 **the patent examiner said, "Figure 1 shows a**
:34:59 **telecommunication network with a plurality of nodes, of both**
:35:02 **circuit switched type (synchronous data sources) and packet**

:35:07 **switched type (packet data sources)."**

:35:11 **So the examiner picked up on the distinction,**
:35:14 **which is you have got one type of data which is packets and**
:35:17 **one type of data which isn't, which is synchronous or**
:35:20 **circuit switched.**

:35:21 **So when you go back to the proposed**
:35:23 **constructions, it is pretty clearly what is going on. We**
:35:26 **proposed the constructions that map what the invention is.**
:35:29 **Packet data is data that travels in packets. Synchronous**
:35:31 **data is data that is synchronously without packetization.**
:35:36 **Theirs, variable bit rate, doesn't say anything about it**
:35:38 **being in the packet. That is in the patent. For**
:35:42 **synchronous bit rate they say "constant bit rate data."**
:35:46 **That doesn't appear in the specification. That doesn't**
:35:48 **appear in the dictionaries. They made that up out of whole**
:35:52 **cloth.**

:35:52 **It is true, I will give you one maybe possible**
:35:55 **term of agreement, I agree that packet data does have a**
:35:58 **variable bit rate, so if you wanted to modify our**
:36:01 **construction to pick up on theirs, you could say -- you**
:36:04 **could insert variable bit rate in front of our construction**
:36:07 **and say variable bit rate data that travels in packets, if**
:36:10 **you want to do that. That is sort of a compromise.**

:36:13 **But you have to have the packet concept, because**
:36:15 **that is what the whole difference was between the two**

:36:17 **sources of data.**

:36:24 **That brings us to the last term I will do in**
:36:27 **this patent, which is "portion." There is a bunch of terms**
:36:29 **that use this phrase portion, portion, a first portion, a**
:36:35 **second portion, having a bandwidth, things of that nature.**
:36:40 **I really want to just talk about what it means to be a**
:36:42 **portion. If we go to Slide 73.**

:36:45 **What Rembrandt is trying to do with the word**
:36:47 **portion is again leave open the possibility that portion**
:36:51 **actually means all, which doesn't make any sense in the**
:36:54 **context of this invention. The bus is separated into two**
:37:00 **portions. One is the portion for packet data and one is the**
:37:03 **portion for synchronous data.**

:37:05 **You can see that in Slide 77. In Slide 77, you**
:37:13 **see how the bus here is divided. We have seen this figure**
:37:15 **several times. Half the bus is for packet data in this**
:37:19 **figure. Half the bus is for synchronous data.**

:37:22 **That's the whole point of the invention: How**
:37:24 **are synchronous data and packet data going to be shared on**
:37:27 **this bus? So the claims talk in terms of a portion of the**
:37:30 **bus is for packet data. And when you look at the proposed**
:37:35 **constructions on Slide 73, you see that we propose, again,**
:37:42 **the plain meaning of what it means to be a portion. It is a**
:37:46 **fixed amount less than the whole. Less than the whole being**
:37:48 **the key concept. Rembrandt says a part of a whole. Then,**

:37:52 **if you look in their briefing, what they are trying to leave**
:37:55 **open is, it could be the whole part of the whole, because**
:37:58 **they want to argue that our system, which only has packet**
:38:03 **data in it, so the whole bus is being used for packet data,**
:38:08 **they want to argue is infringed because they are going to**
:38:10 **argue that portion means whole. And it doesn't even make**
:38:13 **any sense. It is changing the common, ordinary meaning of**
:38:17 **the word portion.**
:38:18 **THE COURT: Did I understand you to say that**
:38:19 **plain and ordinary meaning may be appropriate?**
:38:21 **MR. DESMARAIS: For this particular one, for the**
:38:23 **word "portion," right. And that's all I have on this**
:38:26 **patent, Your Honor.**
:38:27 **THE COURT: Thank you, Mr. Desmarais.**
:38:46 **MR. ROZENDAAL: May it please the Court, I want**
:38:50 **to address just a few points briefly in response, Your**
:39:01 **Honor, starting with the synchronous data versus packet data**
:39:07 **distinction.**
:39:10 **I think it is important to understand that TDM**
:39:14 **buses were used traditionally for synchronous data, which**
:39:18 **meant that time slots could be rigidly assigned to**
:39:20 **particular data sources and the system would work just fine**
:39:23 **because the data would arrive regularly and the bus would be**
:39:26 **used efficiently. It doesn't matter whether the data going**
:39:31 **onto the bus is in a packet or not in a packet as long as it**

:39:34 **arrives at regular intervals.**

:39:37 **The problem arises when you have data that comes**
:39:41 **in fits and starts. So, for example, when you are**
:39:44 **searching, when you are surfing the web, you send out a**
:39:47 **request for data to a web page, there is a burst of data,**
:39:50 **the web page is downloaded, there is a burst of data. Then**
:39:54 **while you are reading the web page, there are periods when**
:39:57 **no data or not a lot of data is going back and forth.**

:40:00 **That is to be contrasted, with, for example, a**
:40:03 **voice call, where there are constantly little slices of your**
:40:05 **voice being sent across the network.**

:40:08 **So what matters, for purposes of the patent, the**
:40:12 **contrast between synchronous data and packet data is really**
:40:16 **the contrast between synchronous data and asynchronous data,**
:40:20 **constant bit rate data and variable bit rate data. And if**
:40:25 **there were any doubt about that, it is eliminated by the**
:40:27 **plain statement in the specification at Column 1, Lines 9**
:40:31 **and 10. There is synchronous data and there is variable bit**
:40:33 **rate data, such as frame relay.**

:40:36 **The patent says -- and for the rest of the**
:40:38 **patent we are going to call the variable bit rate data**
:40:42 **packet data. But it doesn't matter. The problem is not**
:40:45 **caused by the data being in packets or not being in packets.**
:40:48 **The problem is caused by the data coming in fits and starts,**
:40:52 **or coming in bursts.**

:40:54 **So that is why the key feature of asynchronous**
:41:01 **data is the variable bit rate. The key feature of packet**
:41:04 **data as that term is used in the patent is that it is**
:41:07 **variable.**
:41:09 **Synchronous data is regular data. It doesn't**
:41:10 **matter whether it is in packets or not.**
:41:13 **We see that played out here in a slide that Mr.**
:41:19 **Desmarais used. He emphasizes the packet dedicated portion**
:41:24 **of the bandwidth is referred to as the multiple access**
:41:26 **packet channel which is shared among at least two packet**
:41:29 **application modules. This is in contrast to allocating a**
:41:34 **fixed fraction of the TDM bandwidth to each packet**
:41:38 **application module.**
:41:40 **That last sentence, the one that is not**
:41:41 **emphasized, is what you do to the synchronous application**
:41:44 **modules.**
:41:44 **When the data is arriving regularly, you assign**
:41:47 **a fixed set of time slots to each packet application module.**
:41:52 **Only when it is variable bit rate do they have to share in**
:41:56 **order to make efficient use of the bus.**
:42:01 **Again, even using, again, Mr. Desmarais's own**
:42:05 **example, synchronous data provides the ability to make**
:42:09 **telephone, i.e., voice calls, while the support of packet**
:42:12 **data provides the ability to interwork with the public**
:42:14 **network packet services -- this is exactly the same**

distinction that I was pointing to before. The voice calls which send data at regular intervals can be assigned time slots in a fixed manner, whereas surfing the Internet is a kind of application that causes data to come at a variable bit rate and therefore requires the packet data sources to share the bandwidth.

So the key feature, the key question is, is the data source sending data synchronously at regular intervals, or is it sending it as a variable bit rate? And whether the data is packetized or not makes no difference. If this was an embodiment in the specification, the disclosed embodiment was one in which they had old-fashioned telephone signals that were not in packets and that were sent synchronously, and it had data sources that were sent at a variable bit rate which happened to be in packets, but it doesn't follow from that. It doesn't follow from the fact that the particular embodiment used to describe the invention had packets for one and non-packets for the other, that doesn't change the fact that what matters is whether the data is sent synchronously or is sent at a variable bit rate. And the Court in Texas recognized that.

Now, this slide here is a nice transition, I hope, between the question of synchronized and asynchronous data. Here again we illustrate that we have synchronous data like phone calls where it is possible to assign time

:43:53 **slots rigidly to each of these data sources, whereas the**
:43:59 **asynchronous data sources that send data in fits and starts**
:44:02 **need to share a portion of the bandwidth in order to use the**
:44:05 **bandwidth efficiently.**
:44:07 **THE COURT: So essentially, synchronous data can**
:44:10 **be packetized.**
:44:12 **MR. ROZENDAAL: Yes, that is our point.**
:44:15 **Moving from that to the question of the central**
:44:17 **packet manager and whether there has to be one or doesn't**
:44:20 **have to be one, the central packet manager was used in the**
:44:24 **prior art, or described in the prior art as a central**
:44:26 **traffic cop where all of the data from all of the packet**
:44:29 **sources got sent to a central place before being put onto**
:44:33 **the bus.**
:44:34 **What this patent describes is a system in which**
:44:36 **two key features of the central packet manager are done**
:44:39 **locally, the aggregation of the packet data, which is to**
:44:44 **say, if there is a traffic jam, the data packet is waiting**
:44:48 **to get on the bus, are held locally where they are generated**
:44:51 **rather than being sent to a central storage place, and**
:44:54 **synchronizing the packet data to the TDM bus, which means**
:44:57 **that the packet data can find its time slots directly**
:45:00 **without being sent to a central place to be all synchronized**
:45:03 **onto the bus.**
:45:04 **The Court will search in vain for any statement**

of any other function of the distributed packet manager in the specification. And we agree that the distributed packet manager has to perform those two functions.

The game that the defendants are trying to play, respectfully, is to define the terms in such a way that there can't be any central packet manager needed for anything at all. And as I stand here, I don't know exactly what their central packet manager does. But it's a fair bet, from their insistence on this term, that they have got some central function and they say we need it and they are going to use that as a noninfringement argument.

Again, turning to the slides used by Mr. Desmarais, his underlining stops just before the key points of the specification. He says, no central packet manager is required. What the specification says is, no central packet manager is required to synchronize packet data to the TDM bus.

Later he put up another slide. He said no central packet manager is required. What it said is no central packet manager is required to aggregate the packet data. We agree with that. We agree that aggregating and synchronizing has to be done on a distributed basis. He then goes on to say in his underlining, "and the packet manager is eliminated," is describing the embodiment that was described in the specification. We agree that in that

:46:34 **particular embodiment they didn't have any central packet**
:46:37 **manager at all. It doesn't follow from that that you can't**
:46:40 **ever have a system without a central packet manager. What**
:46:44 **matters is that the distributed packet managers do the**
:46:47 **aggregating and they do the synchronizing.**
:46:57 **On the question, just briefly, of whether the**
:47:00 **distributed packet managers need to talk to one another,**
:47:03 **that again is simply a feature of the preferred embodiment**
:47:06 **or the disclosed embodiment. It's not required anywhere in**
:47:10 **the claims.**
:47:10 **As I suggested yesterday, they could just wait**
:47:13 **for there to be silence on the line and then jump in. There**
:47:16 **is no need for them to talk to each other. In fact, the**
:47:20 **Ethernet bus, which is widely used, uses that kind of system**
:47:23 **where they wait for silence and then take turns hopping on.**
:47:28 **And a final point, Mr. Desmarais said several**
:47:33 **times, in describing Figure 5 of the patent, that there are**
:47:37 **patent channels on the left side and synchronous data**
:47:40 **channels on the right-hand side. I just wanted to point**
:47:43 **out, this portion of the specification at Column 11, Line 6**
:47:47 **through 12, which emphasizes that there could be many**
:47:50 **different packet channels and many different possibly**
:47:53 **synchronous channels using different sets of time slots on**
:47:56 **the line. So here where we have Slots 1 through 6 allocated**
:47:59 **to one set of packet data sources, the specification tells**

:48:02 us we could have the next, 7 through 12, also allocated to a
:48:07 different set of packet data sources. And that is what
:48:09 makes us nervous about some of the constructions where they
:48:11 talk about a set of packet data sources using the whole
:48:16 bandwidth allocated to packet data.
:48:20 Our concern is you could have multiple
:48:22 channels, and we suspect they do have multiple channels with
:48:26 different sets of packet data sources. And we want to avoid
:48:29 a suggestion that there has to be just one big fat packet
:48:33 channel and one big fat synchronous channel.
:48:38 If the Court has no questions, I have completed.
:48:43 MR. DESMARAIS: May I just make two points, Your
:48:46 Honor? Just to crystallize this issue on synchronous versus
:48:49 packet.
:48:49 I think I showed this slide, 65. If Rembrandt
:48:54 was correct, they eliminate the key distinction of the
:48:57 invention. It says here in the summary of the invention,
:49:01 this is Slide 65 of my presentation, "I have realized an
:49:05 alternative approach to the design of TDM-based equipment
:49:08 that supports both synchronous data and packet data."
:49:10 What they are saying, if you buy their
:49:12 construction, is that synchronous data can be packet data.
:49:15 So we would cross out "synchronous" and we would write
:49:19 "packet" here and this would read, I have realized an
:49:21 alternative approach to the design of TDM-based equipment

:49:24 **that supports both packet data and packet data. And we**
:49:27 **would go to the figure, which is the key figure of the**
:49:29 **invention, and change these to packet data modules, and we**
:49:33 **have no invention whatsoever.**
:49:35 **The invention is cast entirely in the**
:49:38 **specification from front to back as how do we deal with**
:49:42 **packet data and synchronous data. If synchronous data can**
:49:45 **be packetized, the specification makes zero sense and the**
:49:49 **summary of the invention is totally wrong.**
:49:52 **When you look at their construction, when you**
:49:56 **look at the two words packet data and synchronous data, the**
:50:00 **distinction that jumps out at you is one of them is a packet**
:50:03 **and one of them isn't.**
:50:05 **If you look at their definitions, they have**
:50:07 **taken packet out of the definition entirely. Why can't this**
:50:11 **be variable bit rate data in packets?**
:50:16 **And constant bit rate data appears nowhere in**
:50:19 **the specification. You can read it cover to cover. That**
:50:23 **phrase, I don't even know where they get it. They didn't**
:50:25 **put in a dictionary. They didn't say it was the plain**
:50:28 **meaning of synchronous. They didn't put in a dictionary. I**
:50:30 **can't find those words in the specification. They are not**
:50:32 **in the figures. They are not in the prosecution history.**
:50:34 **They made it up. The distinction here is packet versus**
:50:37 **synchronous.**

:50:38 **So you look at our construction, it's data that travels in packets. If you want to say it is variable bit rate, that's fine. But the key concept is it's in packets. And under synchronous, it is data sent synchronously -- we don't need "through TDM." It can be TDM. But the issue is, without packets.**

:50:55 **If you read the patent specification, nothing comes through more clearly than that. It is packets versus synchronous.**

:51:04 **THE COURT: Why don't you leave those there.**

:51:07 **Counsel, reaction?**

:51:08 **MR. ROZENDAAL: Your Honor, I don't think we have a problem with variable bit rate data and packet. I don't think that is the problem.**

:51:13 **The problem is that without packetization is something that we can't live with, because we don't think it is accurate. It is not required by the specification.**

:51:22 **THE COURT: Again, why isn't it accurate?**

:51:25 **MR. ROZENDAAL: It is not accurate because whether the data is in packets or not, as long as it is sent synchronously, as long as it is sent in regular intervals, it is possible to allocate time slots to individual data sources and efficiently use the line. So if you have a voice phone call where your voice is chopped up several times a second, assigned to different time slots in the**

line, it will work just fine regardless of whether the data is in packets or not.

At the time of the invention, voice calls were not done using packets. Today, they are. On the defendants' systems they are, but they are sent synchronously. And the assignment is made in such a way that there is not the same kind of sharing as you have with the variable bit rate data, for example, used for Internet surfing. That is the key distinction.

So again, we have a situation where the problem arises because some data comes in bursts, what the patent calls packet data comes in bursts or at a variable bit rate, and other data comes regularly. But as long as the data is coming regularly, you don't need this invention. You can just assign the time slots to data sources in the old-fashioned way and everything will work fine. It is the variable bit rate. It is the burstiness of the data that creates the need for the invention.

THE COURT: Is there anything you wanted to say about the first slide there?

MR. ROZENDAAL: The first slide.

Yes. We are not saying -- this gets things backwards. What we are saying is that the patent tells us that the word packet data in this context means variable bit rate data. What he is saying is, I have realized an

:53:09 **alternative approach to the design that supports both**
:53:13 **synchronous data and asynchronous or variable bit rate data.**
:53:22 **We see that, again, we see that in this same**
:53:24 **callout. The synchronous is sort of in gray, it is hard to**
:53:28 **read, but he says we have got synchronous data on the one**
:53:32 **hand and we have got variable bit rate data on the other**
:53:35 **hand. And the variable bit rate data, he tells us, I am**
:53:38 **going to refer to as packet data.**
:53:40 **So if we look at this slide, rather than cross**
:53:42 **out synchronous, we would leave synchronous, synchronous is**
:53:45 **fine, and where we see packet, we would say variable bit**
:53:49 **rate, which is what the patent says. That is what the**
:53:52 **patent tells us to do.**
:53:54 **THE COURT: All right. You can give that to Mr.**
:53:57 **Desmarais.**
:53:57 **MR. DESMARAIS: I think the only --**
:53:59 **THE COURT: That's it, counsel. Let's not push**
:54:02 **it.**
:54:09 **MR. ROZENDAAL: We are moving on to the '819.**
:54:55 **The next patent we are considering is the '819**
:54:58 **patent, which is thematically related to the patent we just**
:55:02 **considered. It is a different set of inventors, different**
:55:06 **specification, but generally dealing with problems**
:55:08 **associated with time division multiplexing. So we still**
:55:11 **have a TDM bus at the heart of the invention.**

:55:20 **The problem that the '819 patent addresses has**
:55:25 **to do with guard time. I think, as we spoke about earlier,**
:55:31 **different data sources -- in the '819 patent the data**
:55:35 **sources are treated as individual applications within a**
:55:38 **modem. So time slots are allocated not just to modems but**
:55:43 **to applications within a modem, programs within a modem.**
:55:46 **And each program is given a set of time slots or it can**
:55:50 **contest for and request a set of time slots. But each time**
:55:55 **slot is separated from the following time slot by dead**
:55:59 **space, called guard time.**
:56:00 **The idea is the following.**
:56:02 **If I am entitled to use the line from, let's**
:56:05 **say, noon to 12:05, and Mr. Seitz gets to use the slot from**
:56:09 **12:05 to 12:10, I don't want to keep talking right up to**
:56:14 **12:05 because I am afraid he is going to start early. Our**
:56:17 **watches will be a little off. He will think, oh, it's**
:56:21 **12:05, I can go, and we will end up talking at the same**
:56:23 **time, we will have a collision and some of the data will be**
:56:25 **lost. In order to avoid that, guard time is inserted at the**
:56:29 **end of a time slot. So I stop talking at 12:04 to be sure**
:56:34 **that there is not going to be any overlap.**
:56:37 **Obviously, that minute of dead space on the line**
:56:39 **in my example is wasted time. So it would be helpful if we**
:56:42 **could find a way to synchronize our watches in such a way**
:56:45 **that I would know that I can keep talking until 12:04 and 30**

:56:50 **seconds or 12:04 and 45 seconds, thus making better use of**
:56:54 **the line.**
:56:55 **We see that illustrated here by using what the**
:56:59 **patent calls ranging, which is calculating the transmission**
:57:03 **delay between the master unit and each remote modem by**
:57:06 **knowing how far away each remote modem is. It allows for,**
:57:10 **as the abstract tells us, better synchronization of clocks**
:57:14 **and thus reduces the guard time between successive**
:57:18 **transmissions, thereby increasing system efficiency.**
:57:23 **When the guard time is reduced, it is possible**
:57:25 **to add more data to the line in the same amount of time**
:57:31 **because there is not as much dead space between slots.**
:57:38 **What we see in the callout here on Slide 4 is**
:57:42 **Figure 5 of the '819 patent, which illustrates -- the patent**
:57:50 **tells us that the system clock, as it is going tick-tock,**
:57:52 **tick-tock, the period of the system clock is referred to as**
:57:55 **a frame. That frame, that period of time is divided into**
:58:00 **what the patent calls subframes. And the subframes are**
:58:04 **divided into what the patent calls time slots. The time**
:58:07 **slots we see illustrated here, this is a subframe in Figure**
:58:10 **5, with time slots, each time slot allocated to a different**
:58:14 **application.**
:58:14 **Then this is a blowout of what a single time**
:58:17 **slot contains. So the time slot will contain a preamble, it**
:58:21 **will contain a message body, then at the very end here it**

will have the guard time. And that is what we are shrinking by improving the synchronization of the system with ranging.

In addition, the '819 patent tells us that the time slots are assigned to applications on the modem, not just to a modem, but to programs running on modems, and it tells us that an application can request additional time slots as needed. This is an idea similar to the one we just talked about, that if you have a lot of information to send, you can request additional time slots rather than being stuck with the one that you were originally assigned to.

The patent also tells us that time slots will be granted taking into account the priority of the communication.

Here we see highlighted in yellow on Figure 5 reservation request bits. This is an area of the message where the application would say I need to have some more time slots. I have got more data to send. And the priority bits indicate the relative importance of the communication, so that the system can decide who gets the extra time slots if more than one application is requesting them.

So with that brief introduction, I think we will dive right into the claim construction.

We have asked the Court to construe five terms. The defendants have requested construction of 19 terms. And, again, in the interests of time, we are not going to

:59:47 **attempt to address all of the disputed terms. But we will**
:59:50 **address, taking in order in Claim 1, the limitations that we**
:59:55 **think are sort of most hotly disputed or most problematic.**
:00:00 **What we will see as we go through the**
:00:03 **definitions, the proposed constructions, is that the**
:00:06 **defendants try to exclude carrying data with packet headers**
:00:11 **or delimiters, what they call packet headers or delimiters,**
:00:14 **over a time division multiplexed bus, which is to say they**
:00:18 **want this to be an invention that doesn't work with packet**
:00:20 **data.**
:00:20 **The last patent we talked about was all about**
:00:23 **how to get packet data onto a TDM bus. They want to**
:00:26 **construe this in such a way that a TDM is the sort of thing**
:00:30 **that can't carry packet data.**
:00:32 **Secondly, the defendants would require that all**
:00:34 **inbound messages to the master unit contain responses to**
:00:37 **outbound polls. What that means is that the remote units**
:00:44 **only speak when spoken to. A polling system is one in which**
:00:50 **the central unit goes down the line of remote modems, and**
:00:53 **says, have you got something for me, have you got something**
:00:55 **for me, and have you got something for me. As you will see,**
:00:58 **that is not required by the claims. They would construe**
:01:01 **application programs to exclude applications running on**
:01:03 **modems. They would require that a subframe be assigned by a**
:01:08 **user to a single remote modem and that each application be**

:01:12 **assigned to a single time slot per subframe.**

:01:15 **It will come as no surprise to the Court that**
:01:17 **those are features of a particular disclosed embodiment that**
:01:20 **the defendants are trying to make requirements of all**
:01:23 **embodiments.**

:01:24 **And finally, the defendants are trying to**
:01:28 **require that ranging may occur only during initialization of**
:01:32 **the master modem and cannot be conductive. At other times,**
:01:34 **that is completely inconsistent with the specification.**

:01:38 **Okay. If we dive into Claim 1, Claim 1 speaks**
:01:43 **of a communications network comprising a master unit and a**
:01:48 **plurality of remote units communicating with a master unit**
:01:54 **in a multidrop configuration.**

:01:56 **Basically, there is a master unit or a central**
:01:58 **unit, and there are remote units. And we think the jury can**
:02:01 **figure that out without a lot of additional construction.**
:02:04 **So our construction of a master unit is plain meaning, which**
:02:08 **is not no meaning, but means that we don't think the jury**
:02:11 **needs to be told what master unit means. We think they can**
:02:14 **figure it out.**

:02:15 **What the defendants want to do is take this**
:02:17 **opportunity to add the limitation that it is a device that**
:02:22 **sends messages to its remote units using only time division**
:02:26 **multiplexing without packet headers or delimiters. This is**
:02:31 **an argument about the kind of outbound messages from the**

:02:35 **master unit which actually will come up later in the claim,**
:02:38 **because the claim talks about messages outbound from the**
:02:40 **master unit. We will address the particular limitation when**
:02:44 **we get to it in the context of those messages.**
:02:46 **Our point is that you have got a master unit,**
:02:49 **you have got a remote unit. It is pretty clear which one is**
:02:52 **which. By jamming this extra limitation in there, it is not**
:02:55 **helpful to the jury, in addition to being inaccurate. It is**
:02:58 **just an illustration of their constant attempts to take**
:03:01 **every possible opportunity to add something more to**
:03:05 **relatively simple terms in order to set up a noninfringement**
:03:09 **argument.**
:03:10 **The plurality of remote units communicating with**
:03:12 **the master unit in a multidrop configuration, here the**
:03:17 **defendants would add a number of terms, which we have**
:03:20 **underlined. They want all inbound transmissions to the**
:03:24 **master unit to contain responses to outbound polls. Then**
:03:30 **they add the same thing to the modems which receive time**
:03:33 **division multiplexed messages without packet headers or**
:03:36 **delimiters from the master unit.**
:03:38 **All of that, we think, is extraneous and**
:03:40 **unnecessary, and, indeed, incorrect.**
:03:44 **Starting off with master unit, I think here the**
:03:48 **point is, a master unit and a remote unit are simply used to**
:03:51 **distinguish the two kinds of units in the system. We don't**

need to spend a lot of time telling the jury the difference between the two. A remote unit, the specification tells us, is a drop. Remote units, or drops, receive messages outbound from the control unit, the control unit being the master unit. A multidrop configuration, then, a multidrop just means a multi-unit, a plurality of remote unit configuration, where they are sharing a bus. It's a multidrop. That just means you have got a plurality of units on the bus. We don't think that requires any special construction, either. And the specification makes it clear that you have got a master unit and a plurality of remote units connected to the bus.

On the topic of outbound polls, not even the preferred embodiment requires that the remote units speak only when they are spoken to. There are described in the embodiment transmit inhibit and transmit enable features, which would not be necessary if the remotes could respond only to polls from the central unit.

And, in fact, the very prior art reference that they rely on, the Krum reference, for some of their limitations was a system in which the remote units would speak only when spoken to. This system is not one that speaks only when spoken to the remote units.

And moreover, the quote from the specification that the defendants rely on, they do have a quote, it says,

:05:36 "All inbound transmissions contain a preamble, poll response
:05:40 data bits," et cetera, et cetera, and so that looks pretty
:05:43 good for them. I see where they are coming from. The point
:05:46 is, it is in a paragraph that says what happens upon
:05:48 receiving a poll at the remote. So when you get a poll,
:05:53 here is what you get back in this particular embodiment.
:05:55 That's what it says.
:05:56 The question is, can the remote send without
:05:58 getting a poll? And the answer is, yes. And how do you
:06:01 know that? Because it's got a transmit inhibit, transmit
:06:04 enable feature, which enables the remote to speak without
:06:08 being spoken to.
:06:13 All right. Next, the question is remote units
:06:16 executing at least one application program, and the real
:06:20 fight in this limitation is over the term application
:06:23 program. The defendants would like application program to
:06:34 mean a program that directly meets the needs of a user, such
:06:38 as payroll, inventory control, word processing, et cetera.
:06:43 In other words, they want application program to mean an
:06:46 application running on a PC, something like Microsoft Word.
:06:51 But that is not the way that the patent uses the term
:06:55 application program.
:06:57 An application program in the patent is a
:07:00 program running on the modem. And we see this illustrated
:07:05 in Figure 2, where this is one of the remote modems, one of

:07:10 **the remote units, and it has a primary data receiver for**
:07:15 **data going through to the computer or whatever is connected**
:07:19 **to it. And it has a diagnostic channel, which is used for**
:07:23 **diagnostic applications running on the modem to keep the**
:07:26 **communication network operating smoothly.**
:07:30 **So restricting the term application to programs**
:07:33 **like word processors or spread sheets to things that are not**
:07:37 **running on the modem would exclude the preferred embodiment**
:07:40 **from the coverage of the claim, which is a problem for claim**
:07:47 **construction.**
:07:47 **So the term application needs to be construed to**
:07:51 **be applications running on the modem. And during**
:07:54 **prosecution, the term application program was added.**
:07:59 **Originally, it said host application, and during prosecution**
:08:03 **that was changed to application program, to indicate that**
:08:07 **the application can be run on the remote unit and not only**
:08:10 **on the master unit. And after that change, the examiner**
:08:13 **stated that the prior art fails to disclose the execution of**
:08:17 **application program by each of the remote units.**
:08:21 **The remote units in this case are the units that**
:08:23 **are connected to the bus, which is to say the modems.**
:08:29 **We will see, when Mr. Seitz steps back up here**
:08:32 **in a moment, the '159 and '234 patents in suit also use the**
:08:36 **term application program to refer to programs running on the**
:08:38 **modems. And one of the defendants, Arris International, we**

:08:43 **happen to come across, has a patent that also uses**
:08:46 **application programs to refer to programs running on the**
:08:50 **modem.**
:08:50 **This is not an unusual use of the term.**
:08:53 **The defendants also add language to their**
:08:55 **construction that the program has to meet a user's needs and**
:08:58 **has to do so directly. That is not found in the patent.**
:09:02 **And it's not clear what it means. It's doubtful to be**
:09:06 **helpful to the trier of fact. That is just extraneous**
:09:08 **language that doesn't belong there.**
:09:12 **Okay. Messages outbound from said master unit.**
:09:19 **This is a point, this is an issue of the limitation that we**
:09:25 **saw earlier, where the defendants want messages from the**
:09:29 **master unit to be sent using time division multiplexing**
:09:33 **without using packet headers or delimiters.**
:09:38 **I am going to go straight to the claim language**
:09:41 **here. The claim doesn't say anything about outbound**
:09:48 **messages having to be time division multiplexed. It doesn't**
:09:52 **say anything about packets or no packets.**
:09:54 **The defendants get this from a statement in the**
:09:57 **prosecution history. And this is a point that I think is**
:10:01 **not very clearly addressed, or not optimally addressed in**
:10:06 **the briefs. So I would like to spend a little time on it**
:10:09 **here, because it's quite important.**
:10:10 **First of all, basic terminology. Outbound**

refers to the traffic going from the master to the remotes and inbound refers to the traffic going from the remotes to the master.

Also, just as a reminder, again, the applicant did point out a distinction between a prior art reference and the claimed invention in the prosecution history. By doing so, he did not give up claim scope. And this is just another cite to the GemStar case in which the Federal Circuit emphasizes that just because you distinguish a reference doesn't mean that you are giving up the scope of your claims.

So here is the language that the defendants rely on. And again, I think on first glance, we have to say, they have got a point. But they are wrong. And I am going to explain why they are wrong.

They say, "Therefore," talking about the Krum reference, "the outbound messages from the Krum reference master unit are packetized whereas the instant claimed invention is time division multiplexed without packet headers and delimiters."

That is referring, as we will see, to the inbound channel, not the outbound channel.

So Krum's outbound is packetized and the instant invention is time division multiplexed. And as we will see, the time division multiplexing is on the inbound channel and

:11:31 **not the outbound channel.**

:11:34 **Again, it emphasizes down here that inbound**
:11:36 **transmissions are in time slots of specific duration, unlike**
:11:39 **Krum, which doesn't use time division multiplexing on the**
:11:42 **inbound channel.**

:11:44 **We will illustrate how this works on the next**
:11:46 **slide.**

:11:47 **The key point here is that Krum, unlike the**
:11:50 **present invention, was a system in which the remote devices**
:11:55 **will send data only in response to a request from the master**
:11:59 **unit for data. The request came in Krum in the form of a**
:12:04 **packet. And you can see the packets illustrated here on**
:12:08 **Figure 3 from the Krum reference. This is the outbound**
:12:10 **stream. It has a packet with a header and a data payload,**
:12:14 **then it had a polling request, and then another packet with**
:12:18 **a header. And the header would be the address of the remote**
:12:21 **unit from which data would be requested.**

:12:23 **So the master unit would send out a packet that**
:12:25 **would say, okay, Unit No. 3, I am going to be requesting**
:12:30 **data from you in a minute. Get it ready, get this kind of**
:12:34 **data ready to send to me. Later on it would send a polling**
:12:38 **message and say, okay, No. 3, have you got something for me?**
:12:42 **At that point, in response to the poll, on the inbound**
:12:44 **channel, Unit No. 3 would start transmitting, would occupy**
:12:47 **the channel until it was done sending all of the information**

:12:50 **that the master unit had requested, and then it would end**
:12:53 **its transmission. And then the next unit in line would take**
:12:57 **control of the inbound channel.**
:12:59 **What you will notice is that the inbound and**
:13:02 **outbound -- excuse me. The successive messages from the**
:13:05 **remote units on the inbound channel are not of the same**
:13:08 **length and they don't use time division multiplexing on the**
:13:11 **inbound channel.**
:13:13 **So if you don't have packets outbound in Krum,**
:13:19 **if you don't have packets requesting information in Krum,**
:13:22 **you don't get any inbound transmission at all. You only get**
:13:27 **inbound transmission in Krum in response to outbound**
:13:32 **packets. And we can see that in the way that the claim was**
:13:39 **amended and in response to the examiner's rejection based on**
:13:44 **Krum. What the claim was amended to say, that the remote**
:13:47 **units receive messages outbound from the master unit. But**
:13:51 **it doesn't say time division multiplexing and it doesn't say**
:13:54 **anything about packets or no packets. It just says the**
:13:57 **remote units get messages from the master units.**
:14:00 **On the inbound channel, however, the application**
:14:04 **programs and the remote units are assigned to transmit in a**
:14:07 **time division multiple access fashion. This is actually the**
:14:11 **change that was made to the claim as a result of the**
:14:13 **citation of Krum.**
:14:14 **If the portion of the prosecution history meant**

what the defendants now claim it means, then that limitation about no packet headers and delimiters would be found here, and the requirement that outbound messages be time division multiple access would be found here and not here.

And so this sentence that they rely on has to be construed. This is an explanation of the amendment that we see back here.

In a nutshell, the bottom line is in our invention you don't need packet headers and delimiters to do time division multiplexing. That is all it means. And their attempt to stretch that one sentence into something more rests on a misreading of the prosecution history.

Okay. Now we are getting into some of the means-plus-function issues. And again, this is another example of where the defendants have taken what ought to be relatively straightforward terms and asked for construction of a bunch of them next to each other in a longer phrase, resulting in a multiplicity of construction.

The main point from the patent is really one of just terminology. The patent tells us that the clock periods of the system are divided into units called frames, that the frames are divided into subframes, the subframes are divided into time slots.

The defendants want the frame to have a fixed number of time slots and they want them to be assigned by a

:16:04 **user to a single remote unit. There is just no reason to**
:16:09 **require those extra limitations.**
:16:11 **The patent tells us, the frame is divided into**
:16:15 **subframes, the subframe is divided into time slots, and the**
:16:18 **time slots are assigned to applications.**
:16:20 **There is no requirement that the subframes be**
:16:25 **limited to a single remote unit. There is no requirement**
:16:27 **that the time slots need to be assigned by the end user.**
:16:32 **And it's a fair bet that no customer of Comcast or Time**
:16:36 **Warner has ever been asked to allocate time slots on the**
:16:39 **cable network to particular applications.**
:16:41 **Again, this is just, again, taking particular**
:16:43 **snippets of a particular embodiment and trying to make them**
:16:46 **requirements in order to set up noninfringement arguments**
:16:50 **later.**
:16:53 **Here again, we have that the application program**
:16:56 **is assigned to a single time slot per subframe. It is very**
:17:02 **close, again, but it is not quite right. It says that the**
:17:06 **time slots are assigned to applications. It doesn't say**
:17:10 **that an application can't have more than a single time slot**
:17:16 **per subframe. In fact, we know from the specification that**
:17:19 **applications can request additional time slots and be**
:17:22 **granted additional time slots.**
:17:24 **It says here that the, we saw earlier,**
:17:29 **applications can be assigned to time slots previously**

:17:32 **assigned to other applications. The master unit will make a**
:17:35 **decision whether to allow more slots based on the request**
:17:40 **made by the application and the priority bits associated**
:17:43 **with the application.**
:17:44 **This is just extra matter that is inconsistent**
:17:47 **with the specification.**
:17:52 **All right. Having talked about subframes and**
:17:54 **time slots, the defendants request construction of the whole**
:17:58 **phrase, where they again repeat some of these same**
:18:05 **limitations. They also add new limitations that they want**
:18:08 **the frame to be divided into during initialization, they**
:18:14 **want it to be divided by a user, and again, these same sort**
:18:18 **of extra peculiarities of some of the disclosure in the**
:18:25 **specification which are not required for all embodiments.**
:18:28 **I think that the point I am going to emphasize**
:18:32 **here is that the time slot assignments do not have to be**
:18:36 **fixed at initialization. The preferred embodiment shows, in**
:18:40 **Figure 8, it talks about a reservation request from an**
:18:49 **application for more time slots being accepted. And the**
:18:51 **word it uses to describe giving additional time slots is**
:18:56 **assignment. The transmission period, assignment of time**
:18:59 **slots.**
:18:59 **So when it says that application programs are**
:19:06 **assigned, that could be done at any time during the normal**
:19:11 **operation of the device. It's not limited to what happens**

during initialization. And their attempts to limit it to things that happen during initialization is not consistent with the way the words are used in the patent.

I am not going to go through all the other limitations that they jammed into that phrase. I think it's apparent that they are just taking preferred embodiments and trying to make them claim limitations.

On the question of ranging means, again, we have the extra limitation that the ranging, the calculating of the distance between the master and the remotes, the Court will remember that the patent does this in order to reduce the guard time needed in the system. They want to make that happen only during initialization. And they want it to be done in such a way that there is a separate calculation for each combination of remote unit and application, which doesn't make any sense.

First of all, ranging doesn't have to occur only during initialization. The specification tells us, even in the preferred embodiment, the master unit periodically transmits a network clock reading and performs ranging. We see the callout here from Column 6, Lines 32 to 36. And it also tells us that there is a diagnostic channel that can be used -- we saw that on Figure 2 -- there is a diagnostic channel that can be used, for example, to perform new ranging. That also shows that the ranging doesn't only

:20:56 **happen at initialization. It happens periodically, and it**
:20:59 **can happen while the system is operating.**
:21:02 **And the ranging doesn't have to be done for each**
:21:05 **combination of remote unit and application, because we know**
:21:09 **that at least one of the remote units has multiple**
:21:12 **applications running on it. And the distance between the**
:21:16 **master and the remote will be the same for each of the**
:21:20 **applications running on a single remote. So there is no**
:21:23 **need to re-range the same remote unit just because it has**
:21:28 **more than one program active at a given moment.**
:21:36 **The reservation request generator and**
:21:39 **reservation request --**
:21:41 **THE COURT: Your reaction to this proposal: Is**
:21:44 **the function and ranging means calculating and transmitting**
:21:48 **a transmission time between the master unit and each of the**
:21:53 **remote units? You are not going to see it up there.**
:21:57 **MR. ROZENDAAL: Would you repeat it, please?**
:21:59 **THE COURT: Calculating and transmitting a**
:22:01 **transmission time between the master unit and each of the**
:22:04 **remote units. Ranging means.**
:22:21 **MR. ROZENDAAL: I am trying to think, Your**
:22:33 **Honor. I think that sounds right. I think even better**
:22:41 **would be a transmission time adjustment, because the point**
:22:45 **of the ranging is to tell the remote units how to adjust**
:22:49 **their transmissions in the slots to avoid calculation.**

:22:53 **THE COURT: So calculating and transmitting a transmission time adjustment between the master unit and each of the remote units?**

:22:55 :22:58 :23:00 :23:03 **MR. ROZENDAAL: I think that would work, yes.**

THE COURT: Okay.

:23:04 :23:23 :23:26 :23:32 :23:35 :23:39 :23:44 **MR. ROZENDAAL: Okay. The reservation request generator is the device that requests additional time slots for a particular application. And we just think this is a classic example of overreaching on the part of the defendants in attempting to take particular features, particular aspects of one embodiment, and read them in as claim limitations.**

:23:45 :23:47 :23:51 :23:56 :23:59 :24:02 :24:06 :24:10 **The reservation request generator is the part of the system that says, I need more time slots. Please give me more time slots. And they want it to mean a component in the remote unit that monitors a compression buffer for fields exceeding a preset parameter limit stored in the initialization parameter table, blah, blah, blah, blah, blah. This is just a bunch of stuff from one embodiment that doesn't belong in the claim.**

:24:17 :24:19 :24:22 :24:25 **And the law is clear that even if there is only one embodiment described in the specification, that doesn't mean that the claims are limited to the details, the unnecessary details of that embodiment.**

:24:33 **Again, trying to move along, we see the same**

:24:38 **thing --**

:24:38 **THE COURT: Let me get your reaction. We were**

:24:39 **talking about reservation request generator.**

:24:43 **MR. ROZENDAAL: Yes, Your Honor. I was done,**

:24:44 **but...**

:24:46 **THE COURT: A device or devices or process,**

:24:49 **processes, that can grant a request from a remote unit for**

:24:53 **more time slots so that it can transmit a longer message.**

:24:58 **MR. ROZENDAAL: Sorry. Did you say generate?**

:25:01 **THE COURT: I thought we were at request**

:25:04 **generators, were we not?**

:25:06 **MR. ROZENDAAL: Yes. Okay.**

:25:07 **THE COURT: Proposed for your consideration: a**

:25:10 **device or process that can grant a request from a remote**

:25:14 **unit for more time slots so that it can transmit a longer**

:25:17 **message.**

:25:17 **MR. ROZENDAAL: That would be, I think, the**

:25:19 **request processor and not the request generator.**

:25:22 **THE COURT: That is not the request generator.**

:25:24 **Okay.**

:25:24 **MR. ROZENDAAL: I think the request generator is**

:25:27 **the item in the remote units that says, May I please have**

:25:30 **more slots. And the processor is the part in the master**

:25:34 **unit that says, yes, you may.**

:25:44 **Okay. Again, priority bits. The priority bit**

:25:47 **we saw earlier in Figure 5 is the bit that indicates how**
:25:50 **important the particular communication is, and it is what is**
:25:53 **used by the request processor to determine which of several**
:25:58 **competing requests should be granted.**
:26:00 **Here the defendants again add, a bit defining a**
:26:04 **remote unit's relative importance as compared to subsequent**
:26:10 **units set by the user at initialization of the master unit.**
:26:15 **The first requirement really doesn't make any**
:26:16 **sense, because the system will know which remote unit is**
:26:24 **sending a particular message. And so it's not necessary for**
:26:30 **the remote unit to set a priority bit, telling the master**
:26:35 **unit, in effect, how important the remote unit is. The**
:26:39 **master unit will know where it is coming from. If all that**
:26:42 **is needed is the importance of the remote unit, there is no**
:26:45 **need to set a priority bit for that.**
:26:47 **In any event, even if one could construe the**
:26:51 **specification as making that a feature of the preferred**
:26:53 **embodiment, there is no reason to make that a requirement of**
:26:56 **the claim. The priority bit is what is used to determine**
:27:00 **the importance of the communication to determine whether it**
:27:02 **should take priority over other requests. And it doesn't**
:27:06 **have to be the importance of the remote unit. It certainly**
:27:08 **doesn't have to be set by the user. And it doesn't have to**
:27:11 **be fixed only at initialization of the master unit.**
:27:15 **These again are snippets -- I don't doubt that**

:27:17 they will be able to find snippets from the specification
:27:19 that appear to support those features of the preferred
:27:22 embodiment. But they are just not claim limitations.
:27:25 Again, we see the priority bits here.
:27:27 So those are the issues that we have identified
:27:32 in the '819.
:27:34 THE COURT: Okay. Thank you. Let's take a
:27:35 stretch break.
:27:37 (Recess taken.)
:40:15 THE COURT: Let's continue. Mr. Desmarais.
:40:19 MR. DESMARAIS: Thank you, Your Honor.
:40:20 We are on the '819 patent. Let's just jump
:40:25 right into Slide 12. So I am on Slide 12, Your Honor, which
:40:49 is behind Tab 1. So we will jump in at the first term,
:40:55 which is master unit. If we look at the competing
:41:00 constructions, both sides agree that the master unit is a
:41:06 device that communicates with modems or remotes. So we know
:41:10 that it is a unit. We know that it is communicating. We
:41:14 know that it is communicating with remotes.
:41:16 But Rembrandt ignores the key aspect of the
:41:19 communication that it does with remotes, because the
:41:22 invention here is that the communication is time division
:41:25 multiplexed and that it's without packet headers or
:41:31 delimiters. Those are important, because that is exactly
:41:33 what the applicant told the Patent Office in order to get

:41:35 **the patent issued. We wouldn't have a patent here if that**
:41:38 **wasn't the case.**
:41:41 **If you look here in the objects of the invention**
:41:43 **at Column 1, it says, "The basic features of this method and**
:41:47 **apparatus are time division multiplexed outbound**
:41:50 **transmissions from the master to the remote units." Then**
:41:53 **you can see in Figure 1, there is a TDM, or a time division**
:41:58 **multiplexer, going to the outbound units.**
:42:01 **Now, what happened in the prosecution is the**
:42:04 **claims were rejected. They said you can't have a patent**
:42:11 **over the Krum reference. Krum was a packetized system that**
:42:15 **included headers to deal with the issues about how you do**
:42:21 **packet transmissions. What did the applicant do in response**
:42:25 **to that? They made an unequivocal disavowal about what this**
:42:30 **patent was about. As we see on the next slide, in response**
:42:34 **to the rejection, they said, "Therefore, the outbound**
:42:37 **messages from the Krum reference master unit" --**
:42:41 **THE COURT: I guess you should address directly**
:42:44 **counsel's point on this. You don't have to beat around the**
:42:47 **bush.**
:42:48 **MR. DESMARAIS: I am going right there.**
:42:50 **THE COURT: Let's go right there.**
:42:52 **MR. DESMARAIS: So we first have to look at this**
:42:54 **one statement, because I am going to contrast what counsel**
:42:57 **said.**

:42:57 **Counsel said, what the applicant said here was**
:43:00 **referring to inbound messages. If you look at the language,**
:43:04 **we will start there and I will show you what the patent**
:43:07 **says. If you start right there, it says the outbound**
:43:10 **messages from Krum -- in fact, I can put it on the screen,**
:43:15 **and I can point to what I am talking about. It says, "The**
:43:20 **outbound messages from the Krum reference master unit are**
:43:25 **packetized" -- it is talking about Krum. It is talking**
:43:27 **about the outbound messages of Krum. "-- whereas the instant**
:43:33 **claimed invention" -- and it's referring back to what the**
:43:35 **point is in Krum, which is outbound messages -- "whereas the**
:43:38 **instant claimed invention is time division multiplexed**
:43:41 **without packet headers and delimiters."**
:43:44 **What counsel said was, well, what we were**
:43:47 **talking about there is in the '819 patent, we are talking**
:43:50 **about the inbound messages. As a first point, this is plain**
:43:54 **English. It can't be that, because they are talking about,**
:43:57 **whereas the instant claimed invention, and he is referring**
:44:01 **back to Krum's outbound messages.**
:44:03 **But even more fundamentally, if we go back one**
:44:07 **slide to Slide 15, one more, 14, the patent in this case is**
:44:14 **talking about outbound messages. Counsel said that the '819**
:44:19 **patent doesn't do TDM on the outbound. He is saying, that**
:44:23 **must be talking about the inbound because we don't do TDM on**
:44:28 **the outbound. In the objects and summary of the invention,**

:44:30 **it says, "The basic features of this method and apparatus**
:44:33 **are time division multiplexed outbound transmissions from**
:44:36 **the master to the remote."**
:44:39 **He said that, no, no, we do inbound TDM. If you**
:44:42 **look at Figure 1, they have on the outbound, Box 22 there,**
:44:47 **on the outbound is a TDM modulator.**
:44:49 **So the '819 was TDM on the outbound, as a basic**
:44:53 **feature of the invention.**
:44:55 **If we go back to the overhead, when we say here**
:44:58 **in the prosecution history the outbound messages from Krum,**
:45:01 **reference master unit, are packetized, whereas the instant**
:45:05 **claimed invention is time division multiplexed without**
:45:08 **packet headers and delimiters, it is directly contrasting**
:45:12 **packetized with headers and delimiters versus what the**
:45:15 **claimed invention is on the outbound, which is without those**
:45:17 **things.**
:45:18 **So our construction is merely holding the**
:45:21 **applicant directly to what he said in the Patent Office to**
:45:24 **get the patent issued in the first instance.**
:45:28 **By the way, that makes sense, because if you**
:45:30 **look at, just going back to Slide 16, if you can put Slide**
:45:35 **16 up, if you look at the bottom there, it made sense in the**
:45:39 **context of the '819 because packet headers and delimiters**
:45:42 **are not used in the '819 system because the timing and**
:45:46 **control processor in the master unit stores the user input**

:45:50 **slot and subframe assignments. So you don't need the packet**
:45:55 **headers and delimiters.**
:45:57 **When you go back to the construction then, which**
:45:58 **is on Slide 13, I think you see quite clearly, the only**
:46:01 **difference between the constructions is we are holding the**
:46:04 **applicant to what they said about how the communications**
:46:06 **work in order to get the patent, and Rembrandt wants to run**
:46:10 **away from that.**
:46:17 **Should I move on, or do you want to ask**
:46:19 **questions?**
:46:20 **THE COURT: I know how to interrupt, counsel.**
:46:23 **You keep going.**
:46:24 **MR. DESMARAIS: We will go on to the next term**
:46:27 **at Tab 2, remote units communicating with said master unit**
:46:30 **in a multidrop configuration and related terms.**
:46:34 **You will see that in Claim 1, remote, it is**
:46:37 **communicating with said master unit in a multidrop**
:46:39 **configuration.**
:46:40 **THE COURT: Going back to 16, the language**
:46:44 **called out is from Column 2, Line 68. Right?**
:46:49 **MR. DESMARAIS: 68.**
:46:51 **THE COURT: I may be completely missing your**
:46:53 **point. But right after the highlighted portion of the**
:46:57 **section that starts with Additionally, I see the words**
:46:59 **"inbound and outbound burst length for each drop." What is**

:47:03 **the significance of the usage of inbound and outbound?**

:47:07 **MR. DESMARAIS: In the patented system, in the**
:47:09 **'819, they do TDM inbound and outbound. Counsel was making**
:47:16 **the distinction in dealing with the Krum reference by**
:47:19 **saying, well, we only do TDM on the inbound. And my point**
:47:25 **is, number one, that is not correct. When you look at the**
:47:28 **'819 specification, it talks about TDM on the inbound and**
:47:31 **the outbound. And then, when you look at the language of**
:47:33 **what they actually said to the Patent Office, they were**
:47:35 **talking about outbound.**

:47:37 **It doesn't make any sense for two reasons. One**
:47:39 **is, the patent does both. And if you look back, it couldn't**
:47:44 **be more clear. If you look on Slide 14, you know, in the**
:47:49 **objects and summary of the invention, they call this a basic**
:47:52 **feature in the summary of the invention. "The basic feature**
:47:54 **of this method is time division multiplexed outbound**
:47:59 **transmissions." And that is what is in the figures, too.**

:48:00 **So they are doing TDM inbound and outbound.**
:48:03 **They distinguish Krum because Krum's outbound are**
:48:08 **packetized, whereas they say ours are not packetized without**
:48:12 **headers and delimiters. So it is in direct contrast with**
:48:16 **Krum about the outbound transmissions. But the inbound**
:48:21 **transmissions in the patent are TDM as well.**

:48:24 **Slide 18, remote units communicating with said**
:48:28 **master unit in a multidrop configuration. If we look at the**

:48:31 **constructions, Rembrandt's construction essentially reads**
:48:37 **the term multidrop out of the phrase. The phrase we are**
:48:42 **interpreting is, "remote units communicating with said**
:48:45 **master unit in a multidrop configuration."**
:48:48 **Multidrop means something. And what multidrop**
:48:51 **means in this area, in this technology, we show a dictionary**
:48:54 **definition here, multidrop line is a communications channel**
:48:58 **that services many data terminals at different geographical**
:49:01 **locations and in which a computer node controls utilization**
:49:07 **of the channel by polling one distant terminal after another**
:49:10 **and asking it, in effect, do you have anything for me.**
:49:13 **So that is the plain and ordinary technical**
:49:15 **meaning of multidrop. And multidrop is the word that is in**
:49:20 **the phrase. And Rembrandt's proposal does away with**
:49:25 **multidrop because it reads it out of the claim.**
:49:27 **This is the point I was making earlier. They**
:49:29 **are calling it a plain meaning, but they are ignoring one of**
:49:32 **the key terms in the phrase. And that ordinary meaning is**
:49:34 **the meaning that is used all throughout the patent**
:49:36 **specification.**
:49:36 **If you look at Columns 1 and 2 in the background**
:49:39 **of the invention, they talk about, This invention relates to**
:49:41 **an apparatus and method for a master unit and a multidrop**
:49:46 **network to communicate to and from a plurality of remote**
:49:50 **units, using a plurality of host applications, using half**

duplex polled protocols, through the use of time division multiple access techniques.

That's what it means to be multiplexed. It is a polled protocol, meaning the master has to ask the remote, Do you have something for me? And then the remote responds.

It is even in the objects and summaries of the invention, that it is a half duplex polling system, because it is a multidrop system. And it is all throughout the specification. If we look on Slide 22: This system includes the following features. "All inbound transmissions contain a preamble, poll response data bits," et cetera. You know, it goes on and on. In Paragraph 9, the dominant poll response length.

In the figures, if you look at Figure 9, the flow chart is about how the system works. It talks about the DTE, which is the data terminal equipment or remote unit, response to the poll. They call that the normal operation.

When you look at the competing constructions, back to Slide 19, all our construction does is define multidrop with its normal use, normal technical meaning, the way it is used in the specification. It is a configuration where all inbound transmissions to the master unit contain responses to outbound polls to the remote units that receive time division multiplexed messages without packet headers or

:51:06 **delimiters from their master units.**

:51:10 **Their proposed construction leaves out the key**
:51:12 **term multidrop and leaves out the reference, what was the**
:51:15 **key feature of distinguishing from in the prosecution**
:51:18 **history, without which they wouldn't even have the patent**
:51:23 **because the patent was rejected for Krum.**

:51:27 **So we can go to the next term, which is Slide**
:51:30 **26, a period which is divided into a plurality of subframes**
:51:34 **and related terms.**

:51:36 **We see that in Claim 1, and Claim 14 has a**
:51:40 **similar term. If you look on Slide 28, the key differences**
:51:45 **between the two constructions are these slots assigned at**
:51:54 **initialization, and that there is one application per slot,**
:51:57 **which are two of the key features of this invention. One is**
:52:00 **that you have to set up what you are doing for the slots at**
:52:03 **the initialization of the system. And one of the ideas in**
:52:05 **the patent was you are going to have one application per**
:52:08 **slot.**

:52:09 **Where do we find those definitions? You can**
:52:14 **see, Slide 30, right in the claim language, it tells us that**
:52:18 **a subframe is a division of a single frame. Then going on,**
:52:23 **it talks about network timing and control processor 12**
:52:29 **stores user -input initialization parameters including**
:52:33 **network clock framing periods, slot and subframe**
:52:36 **assignments.**

:52:37 **So it's talking about at the initialization, you are setting up the time slot assignments. Then it talks about at Column 4, The time division multiple access sequence is established by the user. And an epoch period or frame is defined by the user. The frame is divided with respect to time into a number of subframes.**

:52:58 **This is all done at the initialization. You see it again at Column 5. And they are describing here Figure 6. They say, This is followed by an initialization of such system parameters as frame period, number of time slots per subframe.**

:53:14 **If you look at the figures, it tells us, this is Figure 6, the flow diagram of initialization. You see they have a box in the initialization sequence that sets up the time frame and the slot assignments. In fact, if we look in the objects and summary of the invention, the specification requires that each application be assigned a unique time slot in a subframe. So we see in Column 2 here at Line 5, "All remote units or drops receive messages outbound from the control unit and respond in a unique time period assigned to each host application. Each application is assigned such a unique time period."**

:53:53 **That's an object of the invention.**

:53:58 **You see it in the figures, when you look at**

:54:00 **Column 4 and Figure 5, which is describing the subframe is**

:54:04 **further subdivided into slots, one for each application.**
:54:07 **When you look at Figure 5, that is the way they set it up.**
:54:10 **You see across the top it says subframe. And each**
:54:13 **application gets its own time slot.**
:54:18 **It's repeated again during the detailed**
:54:20 **description on Slide 36, you see, "From the foregoing it is**
:54:25 **seen that this system includes the following features."**
:54:28 **Paragraph 6. "The master unit preassigns" --**
:54:31 **preassigns -- "time slots within the subframes, one for each**
:54:34 **of the independent host applications."**
:54:38 **So when you look, then, back at the proposed**
:54:41 **constructions, the only real difference between the two**
:54:47 **proposed constructions is ours says at the beginning that**
:54:51 **this is during the initialization, that's the part they want**
:54:54 **to leave out, which is one of the key features of this**
:54:57 **invention. You have to set up a system when you start it.**
:55:00 **And then towards the bottom, where it talks about the**
:55:03 **subframe is assigned by a user to a different application**
:55:06 **whereby the subframes and time slot assignments repeat from**
:55:11 **frame to frame. Those are really only the only key**
:55:14 **distinctions between the two constructions.**
:55:16 **If you look at the words in the claims, the**
:55:19 **words we are actually defining, this is actually one of the**
:55:23 **objects of the invention, to do this at the initialization**
:55:25 **and to do one application per time slot.**

:55:31 **The next term on Slide 37, "in a time slot**
:55:35 **assigned to each of said application programs and related**
:55:37 **terms." It is a smaller part of what we just covered, so I**
:55:43 **won't spend a lot of time on it. But when you look at the**
:55:46 **competing constructions, the issue is, our construction is,**
:55:49 **each application program is assigned to a single time slot**
:55:52 **per subframe, which I explained earlier in the other slide**
:56:00 **was a key feature of the invention and that it repeats every**
:56:02 **frame.**
:56:02 **And Rembrandt's proposed construction, once**
:56:06 **again, does away with a key feature of the application. As**
:56:08 **you can see, I will just point to one slide that summarizes,**
:56:11 **Slide 41, again, in the objects and summary of the**
:56:15 **invention, "All remote units or drops receive messages**
:56:19 **outbound from the control unit and respond in a unique time**
:56:21 **period assigned to each host application. Each application**
:56:25 **is assigned such a unique time period."**
:56:33 **Now, what are these host applications, or these**
:56:37 **application programs that we talked about? That's the next**
:56:40 **term I want to talk about, behind Tab 5 in Slide 44. You**
:56:47 **see it in Claim 1. It's in Claim 14 as well. If you look**
:56:53 **at the competing constructions, you know, this is another**
:56:56 **instance where Rembrandt is defining just a portion of the**
:57:00 **word. The word we are defining here is application**
:57:03 **programs. If you look at Rembrandt's construction, they are**

:57:06 **defining a program, a computer program or process that can**
:57:11 **be run on a remote communication device, such as a modem.**
:57:14 **That is the definition of computer program, not application**
:57:17 **program. An application program has a special meaning, and**
:57:21 **an application is something users use.**
:57:24 **So when you look at our proposed construction,**
:57:26 **it is a program that directly meets the needs of a user,**
:57:29 **such as payroll, et cetera. And that is not a limiting**
:57:32 **instruction. It says, "et cetera." We are not limiting it**
:57:34 **to those things we listed there.**
:57:36 **THE COURT: You would agree with something like**
:57:39 **a computer program that performs tasks for an end user.**
:57:43 **MR. DESMARAIS: Yes, exactly. If you don't want**
:57:45 **to itemize the examples, we don't need to itemize the**
:57:48 **examples. I was trying to be helpful. We said "et cetera."**
:57:51 **We didn't mean to limit it.**
:57:52 **The key difference is an application is**
:57:54 **something for the end user's needs. From using your own**
:57:58 **computer, the computer has a lot of programs on it. The**
:58:01 **application programs are the word processors and the e-mail**
:58:04 **and things of that nature. It has other programs on it that**
:58:06 **run the computer, how the computer goes to the printer, how**
:58:09 **the computer talks over the Internet. Those are not**
:58:12 **application programs. Those are system programs that the**
:58:15 **computer uses.**

:58:16 **If you look in the technical dictionaries, this**
:58:19 **is borne out. We have shown two examples here on Slide 47.**
:58:22 **Application program is defined as a computer program that**
:58:25 **directly meets the needs of a user, such as, that's where we**
:58:28 **got our definition. That's why we put in those examples.**
:58:31 **We don't need to use those examples. Again, computer**
:58:34 **software program designed for a specific job, such as word**
:58:37 **processing, et cetera.**
:58:38 **You are talking about an application program is**
:58:40 **something for a user, that a user uses, as opposed to**
:58:44 **something the system uses to get a job done.**
:58:48 **I will talk quickly about ranging means, which**
:58:52 **is behind Tab 7, Slide 56. So let's go to 57. You see**
:59:00 **ranging means in Claim 1. Let's go to Slide 58. It's a**
:59:07 **means plus function, it's a ranging means for doing**
:59:11 **something. The claim language, if you look at our proposed**
:59:14 **construction, we are taking the function directly out of the**
:59:17 **claim language. There is no tweaking, no augmenting. So I**
:59:24 **don't know that we need to debate that much. It is the**
:59:26 **words of the claim.**
:59:28 **The real issue here is what is the structure.**
:59:32 **So if we turn to Slide 60 and look at the competing**
:59:37 **corresponding structures, Rembrandt's structure, as they**
:59:40 **proposed in their charts, isn't even structure. It is just**
:59:46 **words. They don't show the ranging means as it appears in**

:59:50 1 **the specification. But then in their briefing, they appear**
:59:53 2 **to make a concession on what the structure should be. And**
:59:55 3 **that's why I wanted to cover this term and point that out.**
:59:58 4 **THE COURT: How about network timing and control**
:00:00 5 **processor 12, ranging network initialization generator 20,**
:00:04 6 **and ranging receiver 32?**
:00:07 7 **MR. DESMARAIS: I think, in fact --**
:00:09 8 **THE COURT: Not all the other stuff that you**
:00:11 9 **propose.**
:00:11 10 **MR. DESMARAIS: Here is what I would say to**
:00:13 11 **that. I agree as far as this goes, and so does Rembrandt in**
:00:17 12 **their brief. When you have processors where the**
:00:22 13 **specification discloses their algorithms, the Federal**
:00:26 14 **Circuit has told us we have to put the algorithms in as the**
:00:29 15 **corresponding structure that is disclosed in the patent.**
:00:33 16 **So I think we are constrained, if we are going**
:00:35 17 **to all agree that it is a network, timing and control**
:00:38 18 **processor --**
:00:39 19 **THE COURT: Which panel was that that said that?**
:00:43 20 **MR. DESMARAIS: Fair point. I think we have an**
:00:45 21 **agreement anyway, because if you look at Rembrandt's brief**
:00:48 22 **at Footnote 13, I think they have come around to our way of**
:00:53 23 **thinking on this. If you look down here, they say, if it is**
:00:59 24 **means plus function, the corresponding structure is, and**
:01:01 25 **they agree to these elements, network processor 12, ranging**

:01:05 **and network initialization generator 20 and ranging receiver**
:01:08 **32 as shown in the figures and described at these places in**
:01:11 **the specification.**
:01:12 **So if you want to -- I will agree with that.**
:01:14 **THE COURT: You would agree with that, counsel?**
:01:17 **MR. ROZENDAAL: Well, Your Honor --**
:01:18 **THE COURT: I know you agree with what you**
:01:20 **wrote.**
:01:20 **MR. ROZENDAAL: I do agree with what we wrote.**
:01:23 **I don't think it is a means-plus-function term because it**
:01:26 **doesn't use the phrase "means for." But if the Court were**
:01:29 **to disagree --**
:01:31 **THE COURT: If I were to construe it as such,**
:01:32 **you agree.**
:01:33 **MR. ROZENDAAL: Yes, Your Honor.**
:01:34 **MR. DESMARAIS: If you do what they suggested,**
:01:36 **which is put in the figures and these sections of**
:01:40 **specification and the corresponding structure, I think we**
:01:41 **would be okay with that.**
:01:45 **Should I address whether it is a means-plus-**
:01:48 **function structure?**
:01:48 **THE COURT: I don't think you need to.**
:01:52 **MR. DESMARAIS: That is all I wanted to do on**
:01:54 **this patent, unless you had questions.**
:01:55 **THE COURT: I don't.**

:02:10 **MR. ROZENDAAL: Just a few points in response,**
:02:26 **Your Honor.**
:02:26 **First of all, on the issue of multidrop and**
:02:37 **whether multidrop requires polling or doesn't require**
:02:40 **polling, the only evidence that the defendants have come up**
:02:45 **with that multidrop requires polling is extrinsic dictionary**
:02:49 **definition. There is nothing in the patent that says a**
:02:51 **multidrop configuration requires polling in every instance.**
:02:55 **More to the point, even if one assumes that a**
:02:58 **multidrop configuration supports polling, what they want to**
:03:02 **do is they want to require that it's all polling and nothing**
:03:05 **else, that there is never a message from a remote unit that**
:03:09 **goes to the master unit without accepting response to a**
:03:13 **poll. And there is absolutely nothing in the specification**
:03:14 **that requires that. And, indeed, as I pointed out earlier,**
:03:18 **the fact that it has a transmit enable and transmit inhibit**
:03:21 **function indicates that that is not the case.**
:03:24 **So, again, this is an example of where they are**
:03:28 **awfully close, but they stretch just that little extra bit**
:03:31 **in order to set up noninfringement positions that are not**
:03:34 **supported by the patent.**
:03:36 **Then on this same definition, we have the issue**
:03:39 **of the time division multiplexed messages without packet**
:03:44 **headers or delimiters. This is the Krum issue. I would**
:03:48 **point out, first of all, Mr. Desmarais misstated our**

:03:55 **position about what the patent says about TDM inbound and**
:03:58 **outbound. Our position is that the patent does not require**
:04:04 **TDM on the outbound channel. It is true that there is a**
:04:09 **description of an embodiment in which TDM is used both**
:04:13 **inbound and outbound. But in the claims, the patent does**
:04:17 **not require TDM on the outbound channel. In fact, we see**
:04:20 **that in the very phrase at issue.**
:04:24 **It says, "The instant claimed invention is time**
:04:28 **division multiplexed." Where in the claim, as amended, in**
:04:32 **response to Krum, is the time division multiplexing? It is**
:04:36 **only on the inbound channel. This is the claim that is**
:04:38 **being explained in that phrase.**
:04:41 **There is no limitation on the kind of**
:04:43 **communication that happens outbound. The only time division**
:04:47 **multiplexed channel in the claim is inbound.**
:04:51 **So when they say, when the applicants said the**
:04:56 **claimed invention is time division multiplexed without**
:05:00 **packet headers and delimiters, what it means is we don't**
:05:03 **need packet headers and delimiters to make our TDM work**
:05:06 **inbound.**
:05:10 **Finally, on the issue of application programs,**
:05:13 **again, we saw reference to extrinsic evidence in the form of**
:05:17 **dictionaries. I think that there is equally persuasive**
:05:21 **evidence that the term application programs is used to refer**
:05:25 **to programs that are running on modems. We have the**

:05:27 **defendants' own patents that say it. We have some of the**
:05:30 **patents in suit that say it. This is not an exotic or odd**
:05:34 **usage that we are requesting here. And the point is that in**
:05:38 **the patent, the remote units, the remote --**
:05:42 **THE COURT: You didn't like my proposal?**
:05:44 **MR. ROZENDAAL: We would submit that it's not**
:05:48 **correct, Your Honor, because the remote units are the items**
:05:50 **that are attached to the bus. And in this case, the items**
:05:54 **attached to the bus are the modems. And the intrinsic**
:05:58 **evidence is clear that the applications are running on the**
:06:01 **modems.**
:06:01 **THE COURT: So a computer program running on a**
:06:03 **modem that performs tasks for an end user.**
:06:09 **MR. ROZENDAAL: I suppose there is a sense in**
:06:10 **which all the programs perform a task for the end user.**
:06:13 **THE COURT: Yes.**
:06:28 **MR. SEITZ: Your Honor, good morning.**
:07:15 **We are going to do some remote updates. We are**
:07:17 **going to do these two patents together, as the parties**
:07:20 **agreed, because they are related.**
:07:21 **So, just to reorient you, after your chaotic day**
:07:26 **of yesterday, what we are going to be talking about, the**
:07:32 **problem that was identified that the inventors addressed**
:07:35 **with these patents was that you are trying to remotely**
:07:39 **update software within the modems. And one of the issues**

:07:44 **is, first of all, you don't want the users having to pull**
:07:48 **the chips out and putting new chips in. And there are**
:07:51 **problems with just simply sending out a mass download to all**
:07:56 **the modems at the same time.**
:07:57 **So as we said before, the problem with taking**
:08:01 **the chips out and putting new chips in -- I will just skip**
:08:04 **over that -- is essentially that, it's not practical. If**
:08:10 **you are Comcast or someone like that and there is 8 million**
:08:13 **modems out there, that just doesn't work. So you could do a**
:08:17 **mass download like we talked about before, and we have**
:08:20 **represented this here, just quickly. The problem with a**
:08:23 **mass download is, if there is an interruption during the**
:08:26 **mass download, and you are overwriting the other memory that**
:08:31 **exists there, you are stuck. The modem is broken, because**
:08:34 **you have got corrupted software on the modem.**
:08:38 **So the only way to get around that was to have a**
:08:41 **chip that wasn't subject to the update. But, of course,**
:08:45 **that defeats the whole purpose, which is to update the**
:08:47 **software in the modem.**
:08:49 **So what was the solution presented by this**
:08:53 **patent?**
:08:54 **The solution was to do the remote update but**
:08:58 **maintain the integrity of the existing software so that --**
:09:03 **or firmware I think it is called, such that if there is an**
:09:07 **interruption during the download, as you can see here, the**

:09:12 **programs that were already resident in the memory were not**
:09:18 **corrupted and could be used again to initiate a new download**
:09:23 **or run again until a successful download could happen.**
:09:28 **Let's look at a little detail about using the**
:09:31 **patent diagrams here.**
:09:33 **If you look at this figure, Figure 1 from the**
:09:37 **patent, that is essentially representing a modem. It's not**
:09:40 **the complete representation of the modem. We will see**
:09:44 **later, there is memory in the modem which is not shown in**
:09:49 **this diagram. But this is a basic configuration for the**
:09:52 **modem.**
:09:54 **Just to show you how this works, the programs**
:09:59 **are stored in the memory. And we showed you that with the**
:10:03 **bars and the preceding diagram. There is the initializing**
:10:08 **set of programs, as it says in the specification. We think**
:10:11 **that has a pretty plain meaning. It is the set of programs**
:10:15 **that are executed when the modem is initialized. Then there**
:10:20 **is the communication programs, which allow the modem to**
:10:22 **talk.**
:10:25 **There is the installing subroutine, this is**
:10:28 **Slide 8, the installing subroutine, which actually installs**
:10:33 **the new programs.**
:10:36 **And then there are the application programs,**
:10:39 **which run on the modem, other programs that are on the**
:10:43 **modem, the applications as Mr. Rozendaal just said, these**

:10:47 **are the programs that run on the modem and are stored in the**
:10:50 **memory.**
:10:51 **Okay. So how do we accomplish the new download?**
:10:58 **Well, there is a command that comes into branch 12. You can**
:11:01 **see the flashing orange signal there. It essentially tells**
:11:06 **the installing subroutine here that is already resident in**
:11:09 **memory that we are going to do a new install. And then here**
:11:13 **are some terms that we need to introduce to the Court**
:11:15 **because they are going to appear later on. And they are,**
:11:20 **downloading a segment of the essential portions of the new**
:11:24 **package of programs. So the essential programs we have**
:11:30 **labeled in the purple color here. One of those is the**
:11:33 **installing subroutine.**
:11:36 **Why do you need an installing subroutine? Well,**
:11:38 **you need something to direct the new programs to be**
:11:41 **downloaded from the remote source. So the installing**
:11:44 **subroutine, the new installing subroutine is downloaded**
:11:48 **first into memory. Control is transferred to the new**
:11:55 **installing subroutine by an offset address. As you can see**
:12:00 **by our fancy animation here, we are shifting control from**
:12:04 **the old installing subroutine over to the new installing**
:12:07 **subroutine.**
:12:10 **And then the new programs, the remaining**
:12:13 **essential programs are downloaded, as well as the new**
:12:16 **application programs.**

:12:19 **So on the left you have resident in memory the**
:12:23 **old programs. On the right you have all of the new programs**
:12:26 **that have been downloaded into memory 20.**
:12:31 **So in order to run the new software, there is a**
:12:35 **new offset address. We have shown it here in blue, not**
:12:38 **appearing in any of the boxes that are in Figure 1 because**
:12:41 **it could be somewhere else. There is no limitation as to**
:12:44 **where that new address appears. But the purpose of the new**
:12:47 **address is to point to the initialization programs, the new**
:12:51 **ones that are downloaded, so you don't use the old ones.**
:12:55 **This one is an important point. Register 40,**
:12:59 **which was the memory dealing with the new offset address**
:13:03 **that directs the modem to use the new initialization**
:13:07 **programs, can be part of memory 20, as it says here, or it**
:13:14 **can be an EEPROM. An EEPROM is an electrically erasable**
:13:19 **programmable read only memory. But it doesn't have to be --**
:13:24 **it's not necessary that it be that way. And register 40,**
:13:28 **right here, could also be part of read/write memory or part**
:13:32 **of processor 10.**
:13:34 **Now the read/write memory, as I said before,**
:13:36 **doesn't appear in this diagram because, as you will see**
:13:39 **later on in the spec, not everything was depicted. But this**
:13:42 **does show that there is other memory that's part of this**
:13:45 **system, although it's not depicted in Figure 1.**
:13:49 **So that is the basic concept of the invention.**

:13:52 **Just to show you, the '234 patent, just to show you how**
:13:57 **these two patents relate, you see, it's the basic tasks that**
:14:03 **we just showed. There is a command to Line 12 that comes**
:14:06 **down. And then the essential, a portion of the essential**
:14:10 **programs or the essential programs, the new ones, are**
:14:13 **downloaded. As you will see here, the difference is that**
:14:16 **the new essential programs are downloaded, overwrite a**
:14:20 **portion of the existing application programs.**
:14:24 **If you will remember, for the '159 patent, there**
:14:27 **was a clear delineation. There was no overwriting occurring**
:14:29 **between the two patents. In this example, in the '234**
:14:33 **patent, the essential programs overwrite a portion of the,**
:14:40 **we will call it the old application programs.**
:14:44 **After that it is basically the same process,**
:14:47 **Your Honor. There is a new offset address. You have to**
:14:49 **tell the modem to point to the new programs instead of using**
:14:52 **the old ones. And once the new essential programs are used**
:14:58 **to download the new application programs, you have got the**
:15:02 **end result, which is a new set of programs that have been**
:15:06 **downloaded.**
:15:07 **So the difference between the two patents is**
:15:09 **right here. It's in the overwriting of the application, old**
:15:13 **application program.**
:15:15 **New address, finally, is used to point to the**
:15:18 **new programs instead of the old programs.**

:15:22 **All right. This is a pretty stark contrast here.**

:15:26 **On the scale of complexity of interpretation, maybe it would be our view that these patents can be read and can be understood fairly straightforwardly. So we have only asked that the Court construe two claim terms for the '159 patent. The defendants have asked to construe 18 claim terms. I think some of that is a combination of claims within claims within claims, which causes the claims to multiply like rabbits.**

:15:59 **In any event, just jumping to the merits now.**

:16:04 **This is a common theme, which we should stop repeating, but it is a common theme that permeates what they are trying to do here. There is also an ordering that occurs here, which is not supported by the claim language. And there is a number of other things, which we will go through, which are the flaws in the defendants' interpretation.**

:16:26 **So here is Claim 1 of this patent. A processor, that is certainly straightforward enough. Then when we get to Subparagraph (b), a set of programs stored in said memory that are executed when the system needs to be initialized. As you will see here, Your Honor, in the competing interpretations, we have said plain meaning. Mr. Desmarais, in many of his presentations, says our construction. Well,**

:17:02 **our construction is plain meaning, and then we have been**
:17:05 **pretty careful to say, in the alternative, if the Court**
:17:08 **needs a construction. But for most of these, we should be**
:17:11 **pretty clear that we are arguing for a plain meaning**
:17:13 **construction, and that's the one the Court ought to adopt.**
:17:17 **But if the Court doesn't adopt a plain meaning, then we have**
:17:20 **an alternative construction. And this is really a function**
:17:25 **of trying to reduce the number of claim terms that the Court**
:17:27 **has to construe. It's just humanly impossible to construe**
:17:31 **a-hundred-and-some claim terms. There has got be to be some**
:17:35 **plain meaning in here somewhere. That is our preference for**
:17:38 **many of these claims.**

:17:40 **Here is a good example of where the parties have**
:17:44 **really agreed. If you just took what they proposed here,**
:17:49 **the set of programs used by the system to initialize it,**
:17:53 **which essentially is what this says anyway, which is why we**
:17:58 **say plain meaning, if you stop there, everything would be**
:18:01 **good. But the problem, as Mr. Rozendaal pointed out, is**
:18:06 **adding a bunch of limitations which, number one, are going**
:18:09 **to be confusing to the jury, and don't assist in the**
:18:12 **interpretive process. They are merely limitations that are**
:18:15 **added to burden the claim language.**

:18:19 **As you can see here, including the boot-up**
:18:22 **program for the apparatus and programs needed to maintain**
:18:26 **communications between the apparatus and remote processor,**

:18:30 **stored in and executed, there is a limitation, from**
:18:35 **non-volatile memory when the system is powered on or**
:18:38 **rebooted. We are going to dive into the merits just a**
:18:41 **little bit. But I think on the face of this, when you look**
:18:44 **at it, is that helpful to the jury, to understand what a set**
:18:47 **of programs stored in said memory that are executed when the**
:18:50 **system needs to be initialized, is that of any help to the**
:18:54 **jury?**
:18:55 **It doesn't appear to us to be of any help.**
:18:59 **So what are the problems with these added**
:19:02 **limitations?**
:19:04 **Well, in the first limitations, the problem is**
:19:06 **that the defendants have combined the initiation programs**
:19:10 **with the communication programs. As you can see from the**
:19:14 **specification, initiation programs are different from the**
:19:18 **communication programs. It says here, talks about the**
:19:20 **boot-up segments, and it talks about the program segments**
:19:25 **necessary to maintain the communication. As you can see**
:19:28 **from the specification, what was referred to were the**
:19:31 **initialization programs and not the communication programs**
:19:35 **at the same time.**
:19:38 **Another limitation they add there, stored in and**
:19:41 **executed from non-volatile memory. Well, there is no**
:19:45 **requirement in the claim language here, Your Honor, that the**
:19:51 **programs need to be executed from non-volatile memory.**

:19:57 **As I made the point before, there is other**
:19:59 **memory in the system. Some of it is not even shown in**
:20:03 **Figure 1. There is no requirement that the execution of the**
:20:07 **programs come from the non-volatile memory. It could come**
:20:10 **from the memory in other places, including the read/write**
:20:15 **memory, which isn't even shown in Figure 1. What they are**
:20:17 **trying to do is tuck in a limitation that memory 20 in**
:20:21 **Figure 1 is the only place where programs can be executed.**
:20:29 **So here is another long phrase, which I think we**
:20:35 **can argue does not need interpretation, but: said memory**
:20:38 **being of a type which may be completely updated in its**
:20:41 **entirety but which is not volatile.**
:20:45 **We have proposed plain meaning again. As Mr.**
:20:50 **Rozendaal said, they are close, but what they have done is**
:20:54 **tweaked it a little bit to cause us concern. The tweak here**
:20:58 **is that there is a requirement that all contents in the**
:21:02 **non-volatile memory be erased during the update.**
:21:07 **So it's clear there is some overwriting that is**
:21:12 **going on. But the requirement that all contents be erased**
:21:16 **is not a limitation that's supported by the claim or the**
:21:20 **specification.**
:21:21 **As Mr. Rozendaal said, they are going to find**
:21:23 **things in the preferred embodiment where there is erasure.**
:21:27 **There is no question about that. But should that be**
:21:30 **imported as a claim limitation? It should not be.**

:21:33 **Here is what they are going to probably cite to,**
:21:36 **if I had to guess. They are going to cite to this flash**
:21:40 **EEPROM which we talked about, which is a bulk erasable**
:21:44 **memory. But as you see here in the specification, the**
:21:49 **phrase currently, we use an EEPROM. It doesn't say that,**
:21:54 **you know, you have to use or you must use an EEPROM. And,**
:21:58 **if there was ever any doubt, if you look further down to the**
:22:01 **dependent claims, the EEPROM is actually claimed in one of**
:22:07 **the dependent claims.**
:22:09 **So that should, by principles of**
:22:12 **differentiation, should not be read into the independent**
:22:15 **claims. There is no requirement that all memory, as they**
:22:19 **say, all contents be erased during the update.**
:22:27 **Said memory being the only program memory in**
:22:30 **said system. As I said, Your Honor, I think this is a**
:22:32 **pretty straightforward patent, as language goes. And you**
:22:37 **can see what we are really reduced to, or what defendants**
:22:40 **are reduced to will be interpreting what the word only**
:22:43 **means. It really is not necessary.**
:22:47 **So it's fine to interpret program memory. It's**
:22:53 **shown in the patent. We proposed an interpretation without**
:22:58 **the limitation that they have added, which is only memory**
:23:01 **from which the system executes programs.**
:23:04 **Again, they want to tuck in this limitation that**
:23:08 **memory 20 is the only place where programs can be executed.**

:23:13 **Well, the problem is, this patent is about**
:23:17 **downloading and storing programs, so that during the**
:23:19 **download process, when they are stored, there isn't a**
:23:23 **corruption as the download is taking place. Or if there is**
:23:26 **a corruption, you can use the existing memory and the modem**
:23:32 **is not rendered useless. It is about downloading and**
:23:36 **storing. It is not about where programs are executed. But**
:23:39 **what they are trying to do is make that a claim limitation**
:23:41 **here.**
:23:42 **As you can see here, there is, in fact, other**
:23:45 **memory. Here is the read/write data that we referred to**
:23:49 **earlier where programs could be executed from. There is**
:23:53 **other memory. There is no limitation as to where programs**
:23:57 **need to be executed.**
:23:59 **We agree that program memory is where programs**
:24:03 **are stored, yes. But there is no limitation as to where**
:24:06 **programs need to be executed.**
:24:09 **Now, they are going to pull up this snippet from**
:24:11 **the specification and say, well, the inventor said that the**
:24:16 **read/write memory was irrelevant for purposes of this**
:24:18 **invention. Well, it is, as long as you stay true to what**
:24:25 **the invention is, downloading and storing programs. So the**
:24:28 **read/write memory isn't necessarily relevant to that. But**
:24:31 **it doesn't mean that read/write memory can't be used to**
:24:35 **execute programs.**

:24:40 **Then here we have the classic kind of**
:24:43 **overreaching, which is what does the word "only" mean?**
:24:47 **That's really what we are after here. "Said memory being**
:24:51 **the only program memory in said system." If we just defined**
:24:55 **program memory, why is it necessary to define the rest of**
:24:58 **this term? It seems to us imposing an unnecessary burden on**
:25:05 **the Court and the parties to do that.**
:25:07 **So, once again, what's tucked in here is the**
:25:10 **same repeating theme, which is that memory 20 has to be**
:25:16 **where programs are executed. I think we have beat that**
:25:24 **horse to death.**
:25:26 **So, next. The alterable storage means for**
:25:29 **holding a displacement multi-bit memory address. If you**
:25:33 **will remember, Your Honor, once you download the new set of**
:25:36 **essential programs and you download the new application**
:25:39 **programs, you need to point the modem to use those programs**
:25:44 **instead of using the old programs. That's basically what**
:25:48 **this is about.**
:25:51 **And the parties agree that this is a**
:25:54 **means-plus-function element. And we have identified the**
:25:59 **function, which comes right out of the claim language,**
:26:04 **holding a displacement multi-bit memory address. We have**
:26:08 **identified the structure as register 40.**
:26:12 **What have the defendants done in this**
:26:13 **means-plus-function claim? They have larded it up with a**

:26:17 **bunch of extra limitations not necessary to describe the**
:26:20 **function.**
:26:22 **What is the function? The function is storing**
:26:24 **an updateable multi-bit address, memory address. So we are**
:26:31 **not that different if you don't add the extra limitations.**
:26:34 **But then they add the limitation that is supplied by the**
:26:40 **processor and changes the first non-volatile memory location**
:26:43 **accessed by the processor when the system is powered on or**
:26:47 **re-booted.**
:26:48 **Well, we have already seen, the jury can**
:26:51 **understand what initialization is or what it means to**
:26:54 **initialize the modem. We don't need all that extra**
:26:57 **language.**
:26:57 **As you can see here, the additional limitations**
:27:02 **that they propose don't even make sense, because we see**
:27:06 **here, this is back to this reference to an EEPROM, which is**
:27:09 **a bulk erasable memory.**
:27:12 **You can see, though, that we know that the**
:27:14 **register can hold that offset address. And the register 40,**
:27:19 **which has the offset address, can be part of the read/write**
:27:23 **memory, is not shown on Figure 1, or part of processor 10.**
:27:27 **So you can combine the register with the**
:27:30 **read/write memory or processor 10.**
:27:33 **So if that is the case, then if you take their**
:27:36 **interpretation of this claim language, it would mean**

:27:39 **updateable offset address register 40 which is part of the**
:27:44 **processor 10 connected to processor 10 and modifier circuit**
:27:48 **30. You can see, it doesn't even make sense what their**
:27:52 **proposed claim interpretation is when you have this option**
:27:56 **of having it stored in another location or having another**
:28:00 **location use the offset address.**
:28:05 **So, again, we have got our chart which we have**
:28:08 **put at the end of each of these patent presentations, which**
:28:12 **deal with all of the extra limitations that defendants have**
:28:15 **tried to add to these claims which aren't necessary to help**
:28:19 **the jury understand the meaning of what we think in this**
:28:25 **patent are very straightforward terms.**
:28:27 **The '234 patent. Once again, I think you will**
:28:33 **find, Your Honor, once you understand what some of the words**
:28:36 **are in the '234 patent -- and I am going to explain those**
:28:40 **just so the Court will have a reference point -- you will**
:28:43 **see that this patent can be fairly easily taken through, I**
:28:47 **think, by the jury without a lot of interpretation. We**
:28:50 **asked for two terms. They asked for 14. And we have much**
:28:55 **of the same themes that occurred with the '159 patent. The**
:29:02 **execution issue, you can't have any other kind of memory.**
:29:05 **You will see some other added limitations here. We are not**
:29:08 **going to go through them because essentially they are a lot**
:29:11 **of the same themes.**
:29:12 **What I wanted to do with Your Honor -- and we**

:29:13 1 **are on Slide 54 now -- is just help understand the**
:29:17 2 **nomenclature that's different with the '159 patent versus**
:29:22 3 **the '234. Then I am going to sit down, because I think it's**
:29:26 4 **many of the same themes with the two patents. But we do**
:29:29 5 **need to understand the nomenclature.**
:29:32 6 **So, this slide, No. 54, gives you kind of the**
:29:38 7 **overall presentation on how the two patents are old. If you**
:29:42 8 **will remember, the distinguishing feature here in the '234**
:29:46 9 **patent is there is an overwriting of the old applications**
:29:50 10 **software, whereas it's distinct in the '159 patent. Other**
:29:55 11 **than that, they are very close.**
:29:58 12 **But the '234 patent uses some different**
:30:01 13 **nomenclature for the same thing in the '159 patent. And we**
:30:05 14 **ought to just go through that. So there is P_{old}, which is**
:30:13 15 **the old set of programs. There is $P_{new,}$ which is the new set**
:30:19 16 **of programs. Then there is EP_{old}, which is the essential set**
:30:22 17 **of programs. If you will remember, Your Honor, the**
:30:25 18 **essential set was the initializing, the communicating, and**
:30:30 19 **then the one that points to the new program.**
:30:34 20 **So you will see, it is the same principles, but**
:30:37 21 **there is different nomenclature here. So there is EP_{old},**
:30:42 22 **there is P_{old}, and then programs new and essential programs**
:30:47 23 **new, $EP_{new.}$**
:30:50 24 **So once you get over the change in nomenclature,**
:30:52 25 **you will see that the distinguishing feature here, or one of**

:30:56 **the distinguishing features is the overwriting of the old**
:31:00 **application programs.**
:31:02 **This is a lot of words. But I think you will**
:31:09 **find that you can pick your way through this once you know**
:31:12 **what the nomenclature is, what it's referring to. But very**
:31:17 **easily understood, in our view, by the jury, without trying**
:31:22 **to drill down and add a bunch of limitations.**
:31:27 **So here the limitations that they try to add to**
:31:30 **the claims in this patent -- as I said, I am not going to,**
:31:33 **in the interests of time, go through them. But you will**
:31:36 **see, it's some of the same themes that occurred with the**
:31:41 **other patent, including execution and whether things have to**
:31:46 **be executed immediately or not and other limitations.**
:31:50 **When you understand the principle of this**
:31:55 **invention is downloading and storing programs and**
:31:58 **downloading and storing in a fashion so that the old**
:32:01 **software is available in case there is a problem with the**
:32:04 **download, where programs are executed, timing and sequence**
:32:08 **of things in execution, all of that is extraneous and**
:32:12 **unnecessary for the jury to understand the claims in this**
:32:18 **patent.**
:32:20 **Thank you.**
:32:20 **THE COURT: Thank you, Mr. Seitz.**
:32:42 **MR. DESMARAIS: May I approach, Your Honor?**
:32:45 **THE COURT: Yes.**

:32:51 **MR. DESMARAIS: I will start with the '159.**

:32:59 **Let's start with, just jump right in at the first slide,**

:33:03 **Slide 7.**

:33:07 **So the first group of terms I want to talk about**

:33:09 **is "a set of programs stored in said memory that are**

:33:12 **executed when the system needs to be initialized" and**

:33:14 **related terms.**

:33:15 **I think this is a good opportunity to point out,**

:33:17 **the way we have set up all these books, Your Honor, and I**

:33:20 **think in the interests of trying to streamline, you will see**

:33:23 **on this title, it shows, we say, quote the term and related**

:33:30 **terms. We did make an effort to group them. If you look on**

:33:33 **Page 8, down at the bottom, we say, where are the other**

:33:37 **terms that are related? You know, Claim 8, Claim 10, Claim**

:33:41 **18, et cetera. That is the same throughout all the books.**

:33:43 **So Mr. Seitz points out in the beginning of each**

:33:46 **of his slides how many terms there are to be construed. But**

:33:49 **we have in the presentation grouped them to actually make it**

:33:53 **much more manageable for the Court, because I think**

:33:57 **interpreting one of them drives the definitions in all the**

:34:00 **other terms because the are related.**

:34:01 **I will point out again, there is eight patents**

:34:04 **here with 80 claims being asserted. So a hundred terms out**

:34:09 **of 80 claims isn't so bad, when you think about it. There**

:34:13 **could have been some paring down on Rembrandt's table as**

well.

Picking up the first term here, a set of programs stored in the memory that are executed when the system needs to be initialized. If we look at the competing instructions, we can see that once again Rembrandt leaves out the words that are right in the claim when they proposed their construction. I can show that here on the overhead.

The claim has it stored in memory. What we are interpreting here is a set of programs stored in said memory that are executed, et cetera. If you look at their construction, it is a set of programs used by the system to initialize "it." They leave out stored in said memory. That is one of the main differences between the two constructions.

They are saying, why did we put in this non-volatile memory? Well, it's in the claim term that we are interpreting, what is stored in said memory. That is one of the key features. You will see in the patent and in the prosecution history, they insisted to the Patent Office that this memory is not in volatile memory. They told the Patent Office that to get the patent. And I will bring you through that.

If we jump to the first slide, Slide 10, what we are interpreting here is the phrase "the set of programs that are used to initialize." Mr. Seitz said, you know,

:35:44 **that doesn't need to be interpreted because it will be clear**
:35:47 **to the jury. How is the jury going to know what are the set**
:35:50 **of programs that need to be initialized? So what we have**
:35:53 **endeavored to do in our construction is define what are the**
:35:56 **set of programs that are going to be used to initialize or**
:36:00 **where do we find that out. We find that out in the**
:36:03 **specification and in the prosecution history, because the**
:36:05 **applicant told us.**
:36:06 **The first place is here at Column 1. The**
:36:08 **applicant says at Column 1, "That resident portion contains**
:36:12 **boot-up segments and program segments that are necessary to**
:36:15 **maintain the communication between the remote processor and**
:36:19 **the local equipment so that the process of downloading the**
:36:21 **programs can continue. This set of programs is the**
:36:24 **essential programs, EP set."**
:36:27 **So the applicant is telling us -- the way the**
:36:30 **invention works is, you have to first download this first**
:36:33 **set of programs, then they take over and do the second half**
:36:37 **of the download.**
:36:38 **So the claim limitation is not plain and simple**
:36:42 **on its own words because it says, the programs that are**
:36:45 **executed when the system needs to be initialized. We need**
:36:48 **to help the jury and tell them what are those programs. And**
:36:51 **the specification tells us.**
:36:52 **It goes on to tell us, at Column 2 and Column 3,**

:36:56 **"In accordance with this invention, all programs, including**
:36:58 **this EP set of programs, that carry out all the elemental**
:37:02 **communications, are downloadable."**
:37:04 **The set of programs that is essential to the**
:37:06 **maintenance of communication with Line 12 is this EP set.**
:37:12 **Then if we look in the prosecution history, you**
:37:15 **know, we have the same thing that has happened in a couple**
:37:17 **other patents in this case. The claims were rejected over**
:37:21 **the Hirano reference in view of Lang. And it was an**
:37:27 **obviousness rejection. What we see here on the screen is**
:37:30 **what the applicant said in response to overcome the**
:37:34 **rejection. The applicant said, "The present invention, as**
:37:38 **defined by independent Claims 1, 6, 8 and 22, as previously**
:37:42 **amended, includes a memory which is of a single type which**
:37:45 **may be updated but which is not volatile and which is the**
:37:47 **only program memory in the system, and a set of programs**
:37:50 **stored in the memory that are executed when the system needs**
:37:53 **to be initialized.**
:37:55 **"In the present invention, on the other hand,**
:37:56 **the initialization programs, including the communications**
:37:58 **programs, can be changed while the system is still**
:38:02 **operating. Then, a re-boot can be performed with the newly**
:38:05 **installed programs operating."**
:38:07 **So the applicant is telling the Patent Office,**
:38:10 **in overcoming the rejection, that this initial set of**

:38:14 **programs that the system needs are the initialization**
:38:17 **programs, including the communications parameters. If they**
:38:19 **didn't say that, they wouldn't even have a patent. All our**
:38:22 **construction does is define the term in the claim according**
:38:25 **to what the applicant told the Patent Office to get the**
:38:28 **patent issued in the first place.**
:38:31 **If we jump to Slide 14, please. What we see in**
:38:37 **Slide 14, at Column 4, for instance, an unequivocal**
:38:41 **statement. I am switching now to what's the memory. There**
:38:43 **is an unequivocal statement in Column 4 that, "At the very**
:38:48 **least, that means that memory 20 must be non-volatile."**
:38:53 **That is said over and over again in this patent**
:38:55 **specification.**
:38:56 **Now, what Mr. Seitz was arguing, well, the**
:38:59 **memory for these EP programs doesn't need to be non-volatile**
:39:03 **because the patent mentions other read/write memory. What**
:39:07 **the patent actually says is that is not the memory that the**
:39:09 **invention is talking about. What it says at Column 2 is, "A**
:39:13 **typical stored program controlled modem also includes a**
:39:16 **read/write data memory."**
:39:20 **"For the purposes of this invention, however,**
:39:21 **these other elements are irrelevant, so they are not**
:39:23 **included in the drawing."**
:39:25 **What Mr. Seitz wants you to do is he wants you**
:39:27 **to interpret this element so that the memory could be the**

:39:29 **read/write memory, when the patent quite clearly says any**
:39:33 **read/write memory has nothing to do with the steps of this**
:39:35 **invention, because at the very least, memory 20 must be**
:39:38 **non-volatile.**
:39:41 **That is said repeatedly throughout the**
:39:42 **specification. I showed you in Column 4 where they tell you**
:39:46 **the two different ways the downloading process of the**
:39:49 **invention works. Everywhere it talks about memory 20 and it**
:39:53 **talks about memory 20 being non-volatile. You can see it in**
:39:57 **the claims. Throughout all of the claims, it talks about**
:40:00 **the memory not volatile in Claim 1. Claim 6, the memory is**
:40:04 **not volatile. It's in Claim 8. It's in Claim 18. Then**
:40:08 **it's even in the prosecution history. Again, as I said**
:40:13 **earlier, the patent was rejected by the Patent Office over**
:40:16 **Hirano in view of Lang.**
:40:19 **And what does the applicant say in response to**
:40:21 **that? "Hirano's memory 19 is made up of two types of**
:40:26 **memory, i.e., a read only memory, or ROM, and a volatile RAM**
:40:31 **memory portion 19. In the present invention, the**
:40:35 **initialization program is located in the single memory,**
:40:38 **which is non-volatile." Then they point out particularly**
:40:44 **the EEPROM.**
:40:46 **"It is clear that the initialization program**
:40:49 **must be stored in non-volatile memory..."**
:40:51 **This is what the applicant told the Patent**

:40:53 **Office. And if they didn't say it, they wouldn't have a**
:40:55 **patent. When we are interpreting this claim element about**
:40:57 **said memory, we can't have that memory allowed to be**
:41:01 **something other than non-volatile memory, because the patent**
:41:05 **applicant told the Patent Office, in our invention, it must**
:41:09 **be always non-volatile. But what they want to do is ignore**
:41:12 **these statements, ignore what's in the specification, have**
:41:15 **that said memory from this claim term we are interpreting be**
:41:19 **any memory in the system. And it is not fair, really.**
:41:22 **There is a public notice function that these**
:41:23 **patents support. This is the third time where we have gone**
:41:26 **through a prosecution history where they made unequivocal**
:41:28 **statements in these patents and Rembrandt's proposed**
:41:33 **constructions want to run away from it.**
:41:35 **I think in the interests of being fair to**
:41:37 **competitors, if my clients' read this prosecution history,**
:41:39 **they can make a system with volatile memory and it ought not**
:41:42 **to infringe.**
:41:49 **So if we can go back to the competing**
:41:52 **constructions, then, those are the really the key**
:41:54 **differences. We are defining what are these programs used**
:42:00 **for initialization. And the patent applicant told us**
:42:03 **repeatedly and then told the Patent Office. And we are**
:42:06 **defining what does it mean to be stored in said memory. The**
:42:13 **Patent Office told us in the specification and told us in**

:42:14 **the prosecution history.**

:42:15 **Those are the two main issues there.**

:42:17 **So we can move on to the next term on Slide 22:**
:42:21 **"Said memory being of a type which may be completely updated**
:42:24 **in its entirety but which is not volatile" and related**
:42:28 **terms.**

:42:29 **We see that in Claim 1. And down at the bottom,**
:42:33 **as you see, it is in the other claims as well.**

:42:36 **What are the proposed constructions, what are**
:42:37 **the differences here? We propose that, "the system enables**
:42:41 **all contents in the system's non-volatile memory to be**
:42:45 **erased and overwritten during an update operation."**

:42:48 **You will recall Mr. Seitz just showed you the**
:42:50 **schematic where, when he had the two sides, only a small**
:42:53 **portion of the memory he showed in his depiction was**
:42:57 **overwriteable. But if you look at how the patent describes**
:43:02 **the situation, the entire memory is overwriteable. If we**
:43:08 **look at the plain language of the claim, it requires a**
:43:11 **non-volatile program memory may be completely updated. If**
:43:14 **we look at Element 1(b) there, "...said memory being of a**
:43:18 **type which may be completely updated in its entirety but**
:43:21 **which is not volatile, said memory being the only program**
:43:23 **memory in said system," if we look at then how it is**
:43:27 **described in the specification at Column 4, "To summarize**
:43:30 **the downloading process of this invention. Bulk erase half**

:43:37 **of memory 20 which does not contain the EP set of programs."**
:43:41 **Then down to step 4: "bulk erase the other half of memory**
:43:45 **20."**
:43:45 **So the entire memory is being bulk erased. It**
:43:49 **is not just limited overlap. Then you look down at the**
:43:52 **second embodiment, Bulk erase the second half, bulk erase**
:43:56 **the first half.**
:43:57 **If you look at the background of the invention**
:43:59 **and the summary of the invention, we see it over and over**
:44:02 **again: updating the entire set of programs. Updating the**
:44:04 **entire set of programs. Download an entire set of new**
:44:07 **programs.**
:44:08 **Then if we look at the prosecution history,**
:44:11 **again, we see the patent was rejected over a reference**
:44:16 **called Beaverton. It was rejected, I think, based on**
:44:21 **Beaverton having an EEPROM memory array, as you see there as**
:44:24 **one of the elements.**
:44:26 **What do the applicants say in return? This is**
:44:28 **the applicants speaking to get around the rejection.**
:44:32 **"However, in contrast to the present invention,**
:44:34 **Beaverton specifically provides for the firmware resident in**
:44:39 **the EEPROM to be hardware partitioned into protected and**
:44:43 **unprotected areas. The partitioning of the firmware**
:44:46 **prevents a user from writing over selected partitions of the**
:44:51 **firmware in the EEPROM.**

:44:51 **"To summarize, the concept of the present**
:44:54 **invention, namely, to be able to change all the programs in**
:44:56 **the system, including the initialization programs, was not**
:44:59 **mentioned in Beaverton and, in fact, is specifically**
:45:01 **prohibited by Beaverton.**
:45:04 **"This clearly shows that their invention does**
:45:06 **not anticipate the use of a memory which can be completely**
:45:09 **overwritten so that all of the programs in the system,**
:45:13 **including the system initialization programs, can be updated**
:45:16 **by writing new programs into the memory. By prohibiting the**
:45:19 **user from writing to certain portions of its system memory,**
:45:22 **Beaverton, in fact, teaches away from the present**
:45:24 **invention."**
:45:25 **Clear and unequivocal contrast between the**
:45:28 **present invention and Beaverton. In this invention, you can**
:45:30 **overwrite the entire memory and all the programs. That was**
:45:33 **the basis for patentability. That's why they have the**
:45:38 **patent in the first place.**
:45:42 **Let's jump to Slide 49, if we could. I will**
:45:47 **skip over some terms in the interests of time. I would like**
:45:49 **to talk about the "means for activating said program for**
:45:52 **controlling communication." We can see, that appears in**
:45:57 **Claim 10, Element (d).**
:46:04 **If we look at the two competing constructions,**
:46:08 **Rembrandt says, "Activating program for controlling**

:46:10 **communication through communication port."**

:46:12 **What is different about ours? Well, we put in**
:46:14 **the concept of "in the non-volatile memory." You can see,**
:46:19 **otherwise, they are identical. I have highlighted this one**
:46:23 **so you can see what is the big difference. It is just this**
:46:26 **yellow. Otherwise, the red underlining is the same**
:46:30 **essentially.**

:46:31 **So "in the non-volatile" memory, is that**
:46:36 **appropriately in there? Let's take a look at that issue.**

:46:49 **We can go back just quickly to talk about that**
:46:53 **term. I will just show you the one slide I showed you**
:46:57 **recently, which is the, it's Slide 18, please. This is what**
:47:12 **we talked about earlier, which is what the patent applicant**
:47:15 **said in response to the rejection over Hirano and Lang: "It**
:47:20 **is clear that the initialization program must be stored in**
:47:24 **non-volatile memory."**

:47:25 **It is the point they said all throughout the**
:47:28 **specification, that it must always be non-volatile memory,**
:47:31 **which, just to refresh, was Slide 14.**

:47:35 **If you look up at the top, "At the very least,**
:47:38 **that means that memory 20 must be non-volatile."**

:47:41 **So when we go back to the competing**
:47:43 **constructions on Slide 51, we see that adding on our**
:47:47 **construction "in the non-volatile memory" is right out of**
:47:50 **the specification, right out of the prosecution history,**

what the applicant required, what the Patent Office required in order to issue the patent.

But because this is a means plus function, we have to look at the structure as well. So let's look at Slide 52 and see what the competing terms are on structure.

The interesting thing about Rembrandt's construction, and the difference with ours, is if we look here -- I have sort of highlighted them so we can see the difference -- they put in the communications port and processor 10 programmed, and they mention Figure 1. But if you look at Figure 1, it has, the only thing that they call it here is processor 10. Processor 10 cannot achieve this function all by itself. They leave out the other elements of Figure 1, which is odd, because they cite Figure 1. So I am not sure why they did that.

The only difference between their construction and ours as far as what is included is we have itemized the other pieces of Figure 1. As you see, 14, 16, you know, 40, 30. So if they meant by "including Figure 1" to include Figure 1, then we are essentially the same. If they really just meant to call it 10, I am not sure how that could work, because 10 can't do the function without the other pieces of Figure 1.

That is essentially the difference. We have itemized the elements of Figure 1.

:49:23 **They said Figure 1 and 2, but I am not sure**
:49:27 **exactly what they meant by that.**
:49:29 **The other point is the algorithm.**
:49:38 **As you can see here, they agree that it has to**
:49:41 **be processor programmed to perform functions, but they don't**
:49:45 **articulate the functions.**
:49:47 **We say that the algorithm has to execute either**
:49:50 **the steps of Figure 2 or 3 out of non-volatile memory.**
:49:54 **The disconnect here, again, I am not sure what**
:49:56 **their point is, because Figure 2 or 3 are doing the same**
:50:01 **thing. It's the downloading. I can show you that on, if we**
:50:05 **look at, put up -- let me do it on the screen. It will be**
:50:10 **easier. Figure 2 and 3 here are both doing the same thing.**
:50:14 **They are just different ways of doing it.**
:50:16 **So Figure 2 is a flow diagram of downloading**
:50:19 **process in accordance with the invention. Figure 3 is a**
:50:22 **flow diagram of an augmented downloading process. So there**
:50:26 **are two figures doing the same operation, although one is**
:50:29 **augmented and one isn't. So when you look at the competing**
:50:34 **instructions, they include Figure 2, but they don't include**
:50:38 **Figure 3. The only difference between ours, we have**
:50:41 **included Figure 2 or 3, because you can do one or the other.**
:50:45 **They are both disclosed corresponding structure for this**
:50:47 **function.**
:50:48 **I am not sure if that is just a mistake on their**

:50:50 **part or if they intended to do 2 and not 3, which logically**
:50:54 **doesn't make sense to me.**
:50:55 **We agree it is a processor. We agree it has to**
:50:58 **be programmed to perform steps. We have included Figure 2**
:51:00 **and 3, which are the steps -- 2 or 3, which are the steps.**
:51:04 **They leave out 3. We have included the other pieces of**
:51:07 **Figure 1, which I think they would have to concede are**
:51:10 **necessary to do the function.**
:51:11 **Really, we are not that far apart. I just think**
:51:14 **that they have made some mistakes or maybe they have an**
:51:17 **explanation for it. But it wasn't articulated in the**
:51:19 **briefs.**
:51:25 **Let me talk then about the means on Slide 57,**
:51:35 **the means for receiving, and it is a long term so I won't**
:51:37 **read it there. You can see it in Claim 10. It's a means**
:51:41 **for activating said program or controlling communication and**
:51:44 **receiving all that stuff. So now we are talking about the**
:51:46 **receiving part of it.**
:51:48 **If you look at the competing constructions,**
:51:52 **Rembrandt leaves out most of the cited functions. They say,**
:51:56 **"receiving information through the communication port" as**
:52:00 **the cited function. But if we go back one slide to the**
:52:03 **claim, that is only a tiny piece of the recited function.**
:52:06 **The recited function is, "receiving information through said**
:52:09 **communication port to modify," then it goes onto the end.**

:52:13 **All we did was include the entire chunk from the claim of**
:52:17 **what the cited function is, which I think is a pretty**
:52:20 **standard way you are supposed to do means-plus-function**
:52:23 **functions. You take what is right in the claim language.**
:52:29 **Then you look at corresponding structure, which is Slide 62.**
:52:37 **This is similar to the point I made before with respect to**
:52:41 **the other structure, so I don't need to belabor it. I will**
:52:45 **just point it out.**
:52:47 **They agree that it has a processor and that it**
:52:50 **has to be programmed. They agree it's Figure 1. So all we**
:52:54 **have done, the only difference is, we agree it is the same**
:52:56 **processor, we have just articulated the other pieces in**
:52:59 **Figure 1. I don't know if that is a mistake on their part**
:53:01 **or if they meant that.**
:53:03 **They also then cite Figure 2, which is that one**
:53:06 **way of downloading, but they leave out Figure 3 again. We**
:53:09 **have included Figure 2 and Figure 3. So it is not that far**
:53:12 **apart. It is the same issue as the previous means plus**
:53:17 **function.**
:53:28 **I will jump to the '234 patent now. We will go**
:53:35 **to the first term, which is on Slide 3, which is memory. I**
:53:44 **don't need to spend a lot of time on this. This is exactly**
:53:47 **the same issue, these two patents are related, and the**
:53:50 **specification, you know, is essentially the same. So we**
:53:53 **look at what it is talking about in the memory, if you look**

:53:58 **at the competing constructions, is non-volatile memory.**
:54:04 **Rembrandt defines it as electronic storage or holding place**
:54:07 **for data, including instructions.**
:54:10 **Why doesn't that work here? It doesn't work for**
:54:12 **the same reasons I mentioned previously. The specification**
:54:15 **tells us it has to be non-volatile memory. And the**
:54:18 **prosecution history tells us that they had to tell the**
:54:21 **Patent Office it was non-volatile memory in order to get the**
:54:25 **patent issued in the first place.**
:54:26 **The Federal Circuit is pretty clear in the**
:54:28 **SciMed case. If you have expressly excluded something in**
:54:33 **the specification, you know, you can't let that be in the**
:54:37 **claim.**
:54:38 **Here the specification very clearly tells us,**
:54:41 **when you see the blowout of the specification down there at**
:54:44 **the bottom, at the very last line, "At the very least memory**
:54:49 **20 must be non-volatile."**
:54:51 **That is a blowout from the specification down at**
:54:54 **the bottom. I have covered this at length previously.**
:54:56 **THE COURT: Do you have Column 2, Lines 50 to**
:55:03 **55?**
:55:07 **MR. DESMARAIS: Yes. I can put that right up on**
:55:09 **the screen.**
:55:17 **Here?**
:55:18 **THE COURT: Yes. You see where it indicates --**

:55:24 **I am just asking a question -- "The apparatus employing the**
:55:28 **principles of this invention does not need to have a**
:55:31 **non-volatile boot-up read only memory"? Are we talking**
:55:34 **about the same thing or are we ships passing in the night?**
:55:39 **MR. DESMARAIS: Can you show me what line you**
:55:42 **are on?**
:55:43 **THE COURT: Line 50, that is, and read on.**
:55:51 **MR. DESMARAIS: Yes. This is talking about --**
:55:55 **in fact, I think I have a slide on this. This is talking**
:55:57 **about a non-volatile boot-up read only memory, which is a**
:56:01 **ROM. And I think I have a slide on that that addresses that**
:56:04 **point. I think it's in the previous -- that is saying that**
:56:09 **it doesn't have to be a ROM, which is a particular type of**
:56:12 **memory.**
:56:15 **Let me see what I have here.**
:56:24 **THE COURT: This is not relevant to the**
:56:28 **discussion of memory.**
:56:29 **MR. DESMARAIS: Exactly. What it is saying**
:56:31 **there is you don't have to have a non-volatile ROM, which is**
:56:34 **a particular type of memory. What they then go on to say**
:56:39 **is, it has to be -- it always has to be non-volatile. It**
:56:43 **doesn't have to be a ROM. It can be an EEPROM. It can be,**
:56:47 **you know, something else. It doesn't have to be a ROM.**
:56:49 **That's what they are saying here. They are saying it**
:56:52 **doesn't have to be a boot-up -- read only memory is ROM.**

:56:55 **Then they say later on -- put up Slide 21 from**
:57:12 **the '159, please. This is picking up on the point, because**
:57:19 **Rembrandt cites this in the brief. They say the only other**
:57:21 **citation upon which Rembrandt relies is that the ROM, read**
:57:24 **only memory, is required, not the non-volatile issue. What**
:57:30 **they say in the brief, this is Rembrandt's brief,**
:57:32 **"Additionally, the apparatus employing the principles of**
:57:34 **this invention does not need to have a non-volatile boot-up**
:57:37 **read only memory."**
:57:39 **That is the section Your Honor was just pointing**
:57:41 **us to. What that is talking about is it doesn't have to**
:57:45 **have a ROM memory, because down later at Column 4, Lines 15**
:57:48 **to 17, they say, "At the very least that means that memory**
:57:52 **20 must be non-volatile." It doesn't need to be a ROM. It**
:57:55 **can be an EEPROM. It can be some other type of non-volatile**
:57:59 **memory. It doesn't have to be ROM. That is what the**
:58:01 **distinction is.**
:58:10 **Then, if we go back to the constructions, you**
:58:13 **can see, that was the point we put on Slide 5 for the '234**
:58:18 **patent. We just take that one statement and say, okay, no**
:58:22 **matter what it is, it has to be non-volatile. When you look**
:58:25 **at their construction, electronic storage or holding place**
:58:28 **for data, including instructions, it's essentially going**
:58:32 **back on what was clear in the specification.**
:58:36 **But even more so, even if the specification had**

:58:41 1 said, you know, even if it could be interpreted as you don't
:58:48 2 have to have non-volatile memory, the applicant changed that
:58:51 3 during the prosecution. If we put up Slide 18 of the '159.
:58:57 4 The applicant says in the prosecution, to get over the
:59:02 5 Hirano reference in view of Lang, "It is clear that the
:59:06 6 initialization program must be stored in non-volatile
:59:10 7 memory."
:59:11 8 So even if Rembrandt wants to read that piece of
:59:13 9 the specification and make an argument, well, you know,
:59:16 10 instead you don't have to have non-volatile, they changed
:59:18 11 that during the prosecution history. They unequivocally
:59:21 12 disavowed that, if they want to take that interpretation by
:59:23 13 arguing here to the Patent Office to get around these
:59:26 14 references that no matter what, it has to be non-volatile.
:59:30 15 I think either way you want to look at it, I don't think it
:59:32 16 says that, but give them the benefit of the doubt, it says
:59:35 17 that, but they modify it in the prosecution. Either way,
:59:38 18 they can't win on that one.
:59:41 19 So let me jump to Slide 7 of the '234. This
:59:48 20 term is "With the aid of a set of communications programs
:59:52 21 P_{old} already resident in said memory." We see that in Claim
:59:57 22 1. Then if we look at the competing constructions, I think,
:00:05 23 you know, we have the same issue that we had before. The
:00:08 24 term we are interpreting up at the top that ends with, the
:00:13 25 last several words are "already resident in said memory."

:00:18 **But then if you look at Rembrandt's construction, they leave**
:00:21 **out any mention of the memory. It is the same issue we**
:00:24 **talked about just previously with the other element. They**
:00:27 **say, in the alternative, their construction is, "...some of**
:00:29 **the P_{old} programs assist with installing P_{new} programs." But**
:00:37 **they don't mention that they are already resident in said**
:00:40 **memory.**
:00:40 **That is the main difference between the two**
:00:42 **proposals.**
:00:42 **We put the memory into the proposal. We say,**
:00:45 **"The P_{old} programs executing from the non-volatile memory**
:00:49 **assist with the downloading P_{new} programs for use in the**
:00:53 **non-volatile memory."**
:00:55 **The claim term says resident in said memory, and**
:00:59 **the antecedent for that is the non-volatile memory. And**
:01:02 **that is the major difference between those two**
:01:04 **constructions.**
:01:06 **Now, if we jump to the last tab, Tab 4, I will**
:01:09 **take up the point of do the steps in these claims have to be**
:01:15 **done in order? Which, I think if you just read the claim**
:01:21 **language, you see on Claim 1, Slide 19, just following the**
:01:26 **words of the claims, the Federal Circuit tells us, if the**
:01:29 **claim language by itself tells you the order, then you have**
:01:34 **to follow the order. You can't do these steps out of order**
:01:38 **and still infringe.**

:01:39 **So when you look at the language, it says,**
:01:41 **"comprising the steps of," you are installing the EP_{new}**
:01:47 **programs in a first area of said memory that contains**
:01:51 **programs other than the EP_{old} programs, thereby overwriting**
:01:57 **at least a portion of the programs...altering operation of**
:02:00 **said apparatus to execute the EP_{new} programs.**
:02:04 **So we know already that the second step has to**
:02:09 **come second to the first step, because in the first step you**
:02:11 **are installing the programs and in the second step you are**
:02:15 **executing the programs. Then in the next step, you are**
:02:20 **installing the remaining programs of said P_{new}. There can't**
:02:25 **be remaining programs if you haven't already installed the**
:02:29 **previous programs.**
:02:30 **So just following the natural language of the**
:02:32 **claim, it tells you these steps have to be done in order.**
:02:36 **And it talks about right after installing the remaining**
:02:39 **programs, which indicates you have already done some**
:02:42 **installing, said P_{new} set of programs is in a second area of**
:02:47 **said memory, which obviously means you already did something**
:02:50 **in the first area.**
:02:51 **So just reading the natural flow of the language**
:02:53 **in and of itself tells us that the steps have to be**
:02:56 **performed in order.**
:02:58 **This is just a summary of the last point. The**
:03:00 **first step is to download the EP_{new} subset of P_{new} into a**

:03:04 **first area of said memory.**

:03:06 **"The second step of altering operation to**

:03:09 **execute the EP_{new} programs cannot occur until the EP_{new}**

:03:12 **programs have already been installed in the first step."**

:03:15 **And "The third step of installing the remaining**

:03:17 **programs into a second area of memory must occur after a**

:03:20 **subset of P_{new} has already been installed in a first area of**

:03:24 **memory."**

:03:25 **Otherwise, it doesn't make any sense and they**

:03:27 **wouldn't be called remaining programs.**

:03:30 **The cases that I mentioned, there is a bunch of**

:03:33 **cases, the Federal Circuit, Slide 21 -- I won't belabor the**

:03:37 **point.**

:03:37 **Essentially, to sum them up, they say, if the**

:03:40 **claim language tells you in its words that the steps follow**

:03:42 **one after another, you need to interpret it that way.**

:03:49 **And we don't have to rely just on the claim**

:03:51 **language. The Federal Circuit also tells us, if the**

:03:54 **specification tells you to do it in order, you can rely on**

:03:56 **that as well.**

:03:57 **Here, in the Loral Fairchild case, the language**

:04:01 **of the claim, the specification, and the prosecution history**

:04:03 **were used to support this concept.**

:04:05 **Here, clearly, the specification has them all in**

:04:08 **order, too, starting right with the abstract. The abstract**

:04:11 talks about "A modified version of the operating
:04:14 communication program of a stored program controlled
:04:17 apparatus is downloaded by first downloading a segment of
:04:21 the new package of programs which contains the essential
:04:23 portion of the new programs. Control of the apparatus is
:04:26 then transferred to the new program segment. Thereafter,
:04:31 utilizing the downloaded essential portion of the new
:04:36 package of programs, the remainder of the new package of
:04:39 programs is downloaded."
:04:41 Clearly right in the specification, right in the
:04:45 abstract is putting it in its sequential order. It is the
:04:46 same in the summary of the invention. Column 2, "Utilizing
:04:49 the most recently downloaded EP set of the new communication
:04:53 package, the second segment downloads the remainder."
:04:57 Clearly, the object of the invention, the
:04:59 summary of the invention is telling us that. When we look
:05:01 at the embodiment in Claim 4, they do it in sequential order
:05:05 and they talk about the remainder, all the same points.
:05:08 It's in the figures. When you look at Figure 2 and Figure
:05:10 3, they are set up in flow charts that follow in time
:05:14 sequence. You first install the new EP set. Then you load
:05:18 the offset. Then you load the remainder of the programs.
:05:22 So it follows chronologically. It is in the detailed
:05:24 description at Column 4. "The immediate effect of loading
:05:28 the offset address into regimen 40 is to transfer control to

:05:32 **the newly installed EP set. That means that the program in**
:05:35 **the new EP set to which control is transferred must be at a**
:05:39 **predetermined logic point so that the communication can**
:05:43 **continue."**
:05:44 **Once operation proceeds under control of the new**
:05:48 **Figure 2, step 52 conditions, which we just showed in the**
:05:51 **flow chart, which we showed in the flow chart, then you load**
:05:52 **the remainder of the programs.**
:05:54 **So all of it, the claim itself, the abstract,**
:05:57 **the summary of the invention and the detailed description,**
:06:01 **all show sequential order needs to be followed, one thing**
:06:04 **followed by another, because you need the previous thing to**
:06:08 **do your next step.**
:06:09 **It also came up in the prosecution history. The**
:06:13 **examiner, when granting this application, actually says in**
:06:16 **the notice of allowance, "The steps" -- in other words, this**
:06:21 **is the reason why it was granted -- "The steps of installing**
:06:24 **the EP programs in a first area of memory containing**
:06:27 **programs other than EP_{old} programs, thereafter executing the**
:06:30 **EP_{new} programs instead of the EP_{old} programs, and installing**
:06:34 **the remaining programs of the P_{new} set in a second area of**
:06:39 **memory not occupied by EP_{new} programs, as recited in**
:06:42 **independent Claims 10 and 14, are not shown or suggested by**
:06:45 **the prior art of record."**
:06:47 **So the important ordering of the steps was a**

:06:50 **reason that the patent was granted in the first place.**

:06:53 **So our proposed construction of this claim is**

:06:55 **that these steps need to be done in the order that they are**

:06:59 **articulated, or there is no infringement.**

:07:02 **THE COURT: Let's take a break.**

:07:04 **(Recess taken.)**

:20:47 **THE COURT: All right. Let's continue. Mr.**

:20:50 **Seitz.**

:20:50 **MR. SEITZ: Two points on rebuttal, Your Honor.**

:20:53 **THE COURT: Yes.**

:20:53 **MR. SEITZ: If we could put Claim 1 back up**

:20:56 **here, please.**

:20:57 **This is on the point of overwriting versus**

:21:01 **complete erasure, where we seem to have a difference of**

:21:07 **opinion.**

:21:08 **Here is the claim language, which says, "Said**

:21:11 **memory being of a type which may be completely updated in**

:21:15 **its entirety."**

:21:17 **"May" is permissive. It does not mean that it**

:21:20 **has to be erased. It means that it can be updated. It**

:21:24 **could be completely overwritten. It could be erased. But**

:21:27 **there is no requirement that it be erased.**

:21:30 **You can see, the claim uses permissive language,**

:21:33 **not mandatory language. If you look at their claim**

:21:35 **construction language, they have essentially made it**

:21:38 **mandatory.**

:21:39 **Onto the next point.**

:21:41 **If we could turn the Elmo on.**

:21:44 **It's interesting, we don't have a quarrel with some of what Mr. Desmarais said on non-volatile memory. But when you look at it, what you did not hear Mr. Desmarais address at all was the distinction between storage and execution. For instance, here is Mr. Desmarais's slide, which clearly shows that there was a distinction made. It's clear that the initialization program must be stored in non-volatile memory.**

:22:19 **We don't have a dispute that memory 20 is non-volatile memory, which is what he spent a lot of his time on, setting up the straw man, that there is not a dispute, that memory being non-volatile. But their claim limitations that they try and add to the claims require that programs be executed from the non-volatile memory. And that's where the quarrel is. There is no requirement in the claim language that programs execute, only that they be stored, as this slide shows.**

:22:52 **Okay. On the means-plus-function claim that Mr. Desmarais got to. The point of dispute is the structure that Rembrandt has proposed is the processor, which is what is used to receive the information through said communication port, which is the claim terms being construed**

:23:26 **here.**

:23:29 **And I think we would agree that you only recite**
:23:34 **the structure that is essential to performing the function.**
:23:37 **That's what the law requires. So instead of just reciting**
:23:41 **the processor which performs that function, what they have**
:23:44 **done is they have tagged on all the other things that hang**
:23:48 **on the processor, instead of just the essential portion of**
:23:51 **this, which is the processor, which accomplishes this**
:23:54 **function. Of course, then they can come back and say, if**
:23:57 **one of these things doesn't hang on the processor or they**
:24:01 **have some different configuration, then all of these things**
:24:03 **that hang on the processor distinguish it and they don't**
:24:08 **infringe.**

:24:09 **So if we limit it to the structure that is**
:24:11 **essential and not put on all the bells and whistles in an**
:24:15 **attempt to distinguish it for noninfringement, we have a**
:24:18 **different case.**

:24:24 **On the ordering that Mr. Desmarais spent some**
:24:28 **time on, the claim language does say steps, Your Honor. And**
:24:31 **I don't think we have a quarrel with the steps, that Mr.**
:24:36 **Desmarais seemed to be saying we have a disagreement that**
:24:38 **there are steps in this claim. What our quibble is, with**
:24:42 **inserting the timing limitation that they try and put in**
:24:45 **here.**

:24:46 **If you see their proposed construction, they**

require immediate execution, for instance. I think you will see, in some of the other step claims, where the claims talk about steps, there is a timing issue.

So, again, I don't think some of what he said was in dispute. But what is disputed is whether there has to be a timing, whether that has to be immediate. I don't think you will see any support for immediate execution of programs.

Again, they get close, but then by inserting things like "immediate," it is an additional limitation, which is not warranted.

Finally, looking at the '234 patent, here is the same problem again with their claim constructions. And it's important to be sensitive to the fact that these patents are not about executing programs, and it's not about using programs from the non-volatile memory. It's about storage. We already showed that in the first slide. The patents are about storage. They are not about where it can execute from. There is other memory in the system where programs can be executed from. So adding a limitation that it has to be executed from the non-volatile memory is not supported by the specification or the claim itself.

Thank you.

THE COURT: Thank you, Mr. Seitz.

MR. DESMARAIS: Is there any chance for me to

:26:17 **make a small point?**

:26:18 **THE COURT: No. I think I got your point.**

:26:27 **MR. ROZENDAAL: Next up, Your Honor, is the '903 patent. This one is a slightly different emphasis, the technology is a little different than what we have been talking about so far.**

:26:43 **The patent has to do with compensating for noise on the transmission line.**

:26:49 **THE COURT: Do I have your handouts?**

:26:51 **MR. ROZENDAAL: I am sorry. I apologize.**

:27:29 **So, as Mr. Seitz mentioned at the beginning of the day yesterday in his brief introduction to the patents, the problem addressed here is that noise introduces unreliability and errors into communications systems so that data sent is not correctly received on the receiving end.**

:27:54 **What the '903 patent does is to adjust the signal being sent out by a transmitting modem in order to compensate for noise that is experienced during transmission. And the result is that the receiving modem gets a clearer message with fewer errors.**

:28:13 **The way it works is that the receiving modem figures out which part of the signal being received is noise, and then transmits that information back to the transmitting modem so that the transmitting modem can adjust its output to compensate for the noise. So it doesn't**

:28:34 **actually eliminate the noise that is on the line, but it**
:28:36 **adjusts the signal before it gets onto the line in order to**
:28:40 **compensate for the noise that will be experienced during the**
:28:42 **transmission.**
:28:43 **The idea is similar to, if Your Honor has been**
:28:47 **on an airplane lately, you will have seen people wearing**
:28:50 **these noise canceling headsets that perceive the noise and**
:28:54 **then are able to compensate for it.**
:28:57 **Another slightly more precise analogy would be**
:28:59 **the equalizer on a home stereo system. If a stereo is in a**
:29:06 **room and there are thicker carpets or curtains that absorb**
:29:09 **certain frequencies, it is possible with an equalizer to**
:29:12 **boost certain signals in the output from the stereo to**
:29:15 **compensate for the signals that are lost due to objects in**
:29:18 **the room. And the result is a higher fidelity reception**
:29:23 **when you are listening, when your ear receives the output of**
:29:26 **the speakers.**
:29:30 **The patent operates on all kinds of**
:29:35 **communications lines. Again, this is coming back to the**
:29:38 **theme we saw from yesterday that defendants occasionally try**
:29:42 **to say these are only telephone patents. The patent is**
:29:45 **explicit that it operates on telephone and other**
:29:48 **communications line applications. So that should not be an**
:29:50 **issue here.**
:29:52 **The figure in the patent that summarizes the**

:29:56 **system most completely is Figure 5, which we have shown**
:30:00 **here. On the left side, we have the remote modem, which we**
:30:05 **have indicated in gray in the background. On the right side**
:30:07 **we have the master modem or central modem in the system.**
:30:13 **And there is a signal transmitted between the**
:30:17 **remote modem and the master modem, which is distorted --**
:30:22 **affected by noise.**
:30:27 **The remote modem sends a signal to the master**
:30:29 **modem. The master modem is able to determine what is**
:30:33 **referred to as the noise spectrum of the received signal.**
:30:39 **And it does that as shown in Figure 4. The received signal**
:30:43 **comes in here at RX as receiver. It goes through an**
:30:49 **analog-digital converter, it goes through an equalizer, it**
:30:54 **goes through a phase connector, and it ends up in an analog**
:30:58 **box 62, which is the slicer. The slicer interprets the**
:31:02 **signal and transmits it into symbols which can be understood**
:31:05 **by the modem.**
:31:06 **The received signal goes into the slicer and it**
:31:08 **also goes into the, what's called the comparator 64, which**
:31:15 **calculates the difference between the actual received signal**
:31:22 **and the signal that it knows should have been received.**
:31:24 **The way this works is, because the modem can**
:31:28 **only understand, can only receive, in a given modulation, a**
:31:33 **certain number of symbols, a certain number of different**
:31:36 **kinds of signals, it can -- if you could imagine the signals**

:31:41 **being plotted on a graph, there will be a point. And the**
:31:44 **modem knows where the point should be because it knows that**
:31:47 **there are only three or four possible points. It can then**
:31:49 **see where the point that it received is, and it can**
:31:52 **calculate the difference between the received point and the**
:31:54 **point that it knows should have been sent. Based on that,**
:31:57 **it is able to figure out that there is noise causing a**
:32:01 **certain amount of distortion between what is actually**
:32:04 **received and what it knows must have been intended to be**
:32:06 **sent.**

:32:08 **So the comparator 64 compares the received**
:32:12 **signal to the presumed signal, and that gives it the error**
:32:15 **signal, which represents the noise on the line.**

:32:18 **That is then run through one more phase**
:32:21 **corrector, and then into something called the complex**
:32:24 **discrete Fourier transform, No. 68, which outputs the noise**
:32:30 **spectrum.**

:32:31 **We are going to talk a little more later about**
:32:33 **how the complex discrete Fourier transform works. The basic**
:32:38 **idea is that it translates a signal, a graph that has time**
:32:44 **on the x axis, so there is a representation of the noise**
:32:48 **signal that has time on the x axis and amplitude on the y**
:32:56 **axis, showing how the noise changes over time. That signal**
:33:00 **is input into the discrete Fourier transform. And the**
:33:04 **output is the same information but graphed in a different**

:33:09 **way.**

:33:13 **All right. So the bottom line is, we**
:33:15 **generate -- we figure out what the error signal is, the**
:33:18 **noise signal. Then we generate parameters based on the**
:33:21 **noise signal that represent the noise at different**
:33:25 **frequencies.**

:33:29 **The parameters are then used to calculate what**
:33:33 **are referred to as pre-emphasis coefficients. Why are they**
:33:36 **pre-emphasis? They are pre-emphasis because they are**
:33:40 **applied at the sending modem rather than the receiving**
:33:43 **modem.**

:33:45 **So the coefficients are sent to the pre-filter**
:33:51 **and the pre-filter will boost certain frequencies or**
:33:55 **suppress other frequencies in order to compensate for the**
:33:58 **noise that will happen on the line during transmission.**

:34:02 **So it doesn't actually eliminate the noise, but**
:34:04 **it adjusts the signal so that the impact of the noise on the**
:34:09 **signal will be less. And there we have the cleaner signal**
:34:17 **arriving at the master modem.**

:34:19 **Okay. Rembrandt has requested construction of**
:34:23 **only two terms in the patent. We think that the rest can be**
:34:25 **done with plain meaning.**

:34:28 **The defendants have requested construction of 15**
:34:31 **terms. And there are four main limitations that we would**
:34:38 **like to focus on in today's presentation. The defendants**

:34:42 **argue that the parameters need to be generated at precisely**
:34:46 **the set of frequencies that are mentioned in the**
:34:48 **specification. It's clear that the specification gives an**
:34:51 **example. It's clear that the invention will work using**
:34:56 **other frequencies. But they would limit the invention to**
:35:00 **those frequencies.**
:35:03 **They define the concept of noise spectrum in a**
:35:06 **way that it can only be plotted in the frequency domain**
:35:10 **rather than in the time domain. I will talk in a moment**
:35:13 **about the exact difference there.**
:35:16 **They would require that the pre-emphasis**
:35:20 **coefficients must be computed only at the transmitting**
:35:24 **modem, which is something not required by the patent. It is**
:35:27 **required that they be applied to the signal at the**
:35:31 **transmitting modem. But they do not have to be calculated**
:35:34 **there.**
:35:36 **And they would also require that the adjusted**
:35:43 **signal to be input into the receiving modem has a constant**
:35:46 **signal-to-noise ratio across all frequencies whether the**
:35:50 **noise is injected before or after the high-frequency**
:35:53 **roll-off of a communications line.**
:35:55 **That is one goal of the invention. It is not a**
:36:01 **requirement of the claims. And it is actually not done in**
:36:04 **the preferred embodiment, for reasons that I will explain.**
:36:07 **So these are extra limitations that we believe**

:36:10 **should not be included in the claim construction.**

:36:16 **Okay. As we have been doing before, we will**
:36:20 **start out by going through Claim 1. Claim 1 begins with "An**
:36:25 **apparatus for calculating pre-emphasis coefficients for a**
:36:30 **transmitting modem in a communications system." And the**
:36:34 **first element is a "first transmitting means in the**
:36:37 **transmitting modem, including adjusting means responsive to**
:36:42 **the pre-emphasis coefficients for adjusting**
:36:46 **frequency-dependent characteristics of an output of said**
:36:48 **first transmitting means."**

:36:51 **The first problem that we encounter in the**
:36:54 **defendants' definition is that the claim contains a**
:36:59 **transmitting means, and then it also includes an adjusting**
:37:03 **means. The defendants in their proposed constructions do**
:37:08 **not distinguish between the transmitting means and the**
:37:12 **adjusting means. As far as we can tell, they attribute the**
:37:17 **structure and function of the adjusting means to the**
:37:21 **transmitting means and vice versa.**

:37:23 **So, first of all, we don't think the**
:37:27 **transmitting means actually requires treatment under 112,**
:37:31 **Paragraph 6, because, first of all, it doesn't say "means**
:37:33 **for." And it talks about -- it's pretty clear that the**
:37:39 **transmitting means is just a transmitter. I don't think**
:37:42 **there is any real dispute about that.**

:37:45 **So we think the transmitter 14 as shown in**

Figure 5, including the pre-filter, would be the transmitting means.

The adjusting means is the pre-filter, Element 16 of Figure 5, which is the part of the modem that applies the coefficients to the signal to compensate for the noise.

And they would require -- that's all we think that the pre-filter or its equivalents, as shown in Figure 5, is all the structure that is needed.

They would require that, first of all, they would make it a conventional modem transmitter, which appears to be some sort of effort to restrict this to telephones, again, which we don't think would be appropriate.

The nine-tap filter 70 is, there is a bunch of extra structure here which we think is not necessary to carry out the function of adjusting the frequency-dependent characteristics. In other words, they take the particular details of the pre-filter in Figure 5 and try to make them requirements for corresponding structure. But, in fact, the law is clear that only the structures needed to carry out the function should be included in the corresponding structure.

The specification is clear that pre-filter 16 pre-emphasizes the digital signals. That's what the function that we are talking about is, the justifying of the

output of the transmitting modem.

We know that the pre-emphasis coefficients are sent to pre-filter 16 so that they can be applied to the signal. And we don't think any more structure is needed. And the proof that no more structure is needed is shown under the doctrine of claim differentiation in Claims 2 and 3. Claim 2 talks about an adjusting means including a filter with several taps. Claim 3 includes a filter with at least nine taps.

If Claim 1 by itself required a filter that had nine taps, then Claims 2 and 3 wouldn't have any content.

Then we get to adjusting frequency-dependent characteristics. This is the function of the adjusting means that we were just talking about. The adjusting means, the function of the adjusting means is to adjust frequency-dependent characteristics of the output. What the defendants are trying to do is add the requirement not found in the claim that this function has to be such that the signal being input into the receiving modem has a constant signal-to-noise ratio across all frequencies whether the noise is injected before or after the high-frequency roll-off of a communications line.

If these words were in the claim, that would be okay. But what they are doing is changing the expressly recited function of a means-plus-function term by adding

:41:08 **extra words, which is a no-no under controlling Federal**
:41:12 **Circuit law.**
:41:14 **We don't think that the function requires any**
:41:17 **particular construction. The frequency-dependent**
:41:19 **characteristics are just characteristics that depend on**
:41:23 **frequency.**
:41:23 **The mention of a constant signal-to-noise ratio**
:41:27 **is mentioned at the outset of the patent as one goal of the**
:41:31 **patent. But it's not required that every embodiment achieve**
:41:33 **a goal perfectly, which seems to be what defendants would**
:41:36 **require.**
:41:38 **Not all communications lines even have a**
:41:41 **high-frequency roll-off. The concept of a high frequency**
:41:43 **roll-off refers to a situation in which the upper**
:41:46 **frequencies being transmitted along the line suffer**
:41:49 **degradation during transmission, so what you have is**
:41:52 **stronger lower frequencies and poor reception at the higher**
:41:56 **frequencies. Not all communications lines have that**
:41:59 **property. And so to require that, to presume that that is a**
:42:04 **requirement of the claim just doesn't make any sense.**
:42:07 **Finally, in the preferred embodiment described**
:42:11 **in the specification, when the coefficients are calculated,**
:42:17 **the coefficients that are going to be applied to adjust the**
:42:20 **signal in the transmitting modem, when they are calculated**
:42:23 **in the preferred embodiment, they are cut in half. The**

:42:28 1 **reason being that only half of the noise compensation is**
:42:30 2 **done at the transmitting modem. And the other half is going**
:42:34 3 **to be done at the receiving modem.**
:42:36 4 **Therefore, as a result of that, even in the**
:42:39 5 **preferred embodiment, even if it were working perfectly, it**
:42:43 6 **would not be the case that the receiving modem gets a**
:42:46 7 **constant signal-to-noise ratio across all frequencies**
:42:48 8 **because half of the compensation for noise is going to**
:42:51 9 **happen at the receiving modem.**
:42:53 10 **So this is really a fairly bold effort on the**
:42:57 11 **part of the defendants just to add extra limitations that**
:43:00 12 **really don't belong in the claim.**
:43:07 13 **Okay. We have generating means for generating**
:43:10 14 **parameters responsive to a noise spectrum. The concept of a**
:43:24 15 **noise spectrum is a representation of the noise that is**
:43:27 16 **present on a communications line. And the defendants, for**
:43:31 17 **reasons that are not fully clear to us, would require that**
:43:36 18 **the noise signal be expressed in a frequency domain plot in**
:43:43 19 **order to count as a noise spectrum.**
:43:45 20 **To give you an idea of what the fight is about**
:43:48 21 **here, if we go to Figure 4 of the patent, as I said earlier,**
:43:54 22 **the signal, at the receiving modem, comes into the receiver.**
:43:58 23 **It goes through the analog-digital converter. It is**
:44:02 24 **converted into symbols. The error signal is calculated.**
:44:05 25 **And the output of that calculation is sent to calculation**

:44:12 **block 68, which is the Fourier transform.**

:44:19 **As this is described in the preferred**
:44:22 **embodiment, the noise signal that leaves circuit 50 is in**
:44:28 **the top domain, which means that, if you could imagine this**
:44:34 **as an x/y graph of the information, the x axis will be time,**
:44:40 **and the variations in the noise over time are input into**
:44:44 **block 68. What block 68 does is takes that same information**
:44:49 **and changes the representation of the information. So that**
:44:53 **the graph coming out of block 68 shows frequency on the x**
:44:59 **axis. So you have the noise organized, you can see how the**
:45:03 **noise changes with frequencies rather than how it varies**
:45:07 **over time. But the information about the noise is exactly**
:45:09 **the same. It's a little bit like, it's two ways of**
:45:12 **representing the same thing.**

:45:15 **For example, one could refer to the location of**
:45:17 **this courthouse by its street address or by its longitude**
:45:23 **and latitude, and the information contained would be the**
:45:26 **same. It would still be a location, and you could find it**
:45:29 **either way. But for some purposes, longitude and latitude**
:45:33 **are more useful, and for other purposes street address is**
:45:35 **more useful.**

:45:36 **The same concept is being applied here. You**
:45:38 **have got the same information being represented as a time**
:45:41 **graph going on and as a frequency graph coming out. But it**
:45:45 **is still a noise spectrum. For reasons that are not clear**

:45:47 **to us, the defendants are asking that the term noise**
:45:50 **spectrum be limited to representations of the noise in the**
:45:53 **frequency domain.**
:45:59 **All right. The generating means which generates**
:46:02 **the parameters responsive to the noise spectrum, again, we**
:46:06 **have a slight disagreement about the function. Instead of**
:46:10 **taking the function from the claim term, as we do,**
:46:16 **generating means for generating parameters responsive to a**
:46:20 **noise spectrum, they say generating parameters by choosing**
:46:23 **points of a noise spectrum. And then they require that the**
:46:31 **corresponding structure not just be a Fourier transform to**
:46:35 **take the information from the time domain into the frequency**
:46:37 **domain. They would require that it be a particular Fourier**
:46:41 **transform that operates at particular frequencies, which is,**
:46:45 **again, not necessary to carry out the function. Any**
:46:48 **frequencies could be used to carry out the translation from**
:46:52 **the time domain to the frequency domain. And they are just**
:46:55 **trying to add extra limitations that are not appropriate,**
:46:58 **extra structure that is not appropriate.**
:47:00 **We have tried to illustrate to sort of make**
:47:03 **sense of where the calculating and generating goes on. The**
:47:08 **parameters are generated out of block 68. The calculation**
:47:15 **of the noise is done in circuit 50, which we have indicated**
:47:20 **here in blue. And, strictly speaking, because the**
:47:23 **generating means says that it includes the calculating**

:47:26 **means, the generating means probably includes both the**
:47:29 **orange and blue portions of the figure here. Then when it**
:47:32 **says said output, it is referring to the signal that is**
:47:35 **output from the transmitter and received at the receiving**
:47:39 **modem.**
:47:39 **So to sort of see how this flows through, the**
:47:42 **output of the transmitter is received in purple. The noise**
:47:47 **is calculated in circuit 50. And parameters are generated**
:47:53 **out of box 68.**
:48:04 **Now, there was a first transmitting means which**
:48:07 **was the transmitter and the remote modem. The second**
:48:12 **transmitting means is the transmitter in the master modem**
:48:16 **which sends information back to the remote modem so that the**
:48:19 **remote modem can adjust its signal. Again, it tells us, the**
:48:25 **claim tells us that the function is transmitting parameters**
:48:28 **to the transmitting modem. And all you need to do that, the**
:48:32 **only structure you need is the transmitter, which is shown**
:48:35 **as element 38 in Figure 5, which sends the signal back to**
:48:40 **the first transmitter.**
:48:41 **They, again, take unnecessary elements of one**
:48:47 **particular embodiment and try to make them requirements for**
:48:49 **the corresponding structure. So it's not enough for them**
:48:52 **that it be a transmitter. It has to be a low-rate**
:48:55 **transmitter. It has to transmit on a side band of the**
:48:59 **primary channel at a low transmission rate through Line 42.**

:49:10 **All you need is a transmitter to send the**
:49:13 **parameters, to send the information back to the receiving**
:49:15 **modem so that they can be applied, the coefficients can be**
:49:20 **calculated and the information applied to the signal at the**
:49:28 **pre-filter. Again, claim differentiation underscores the**
:49:34 **fact that the structure they identify is not necessary to**
:49:37 **carry out the function, because Claim 15 describes an**
:49:41 **apparatus where the second transmitting means transmits over**
:49:45 **a secondary channel. Claim 16 talks about a second**
:49:49 **transmitting means where the secondary channel is a side**
:49:54 **band channel of the first transmitting means.**
:49:56 **So, again, if the requirements of Claims 15 and**
:50:00 **16, if it were true that you needed a secondary channel and**
:50:04 **you needed a secondary channel to be a side band channel,**
:50:14 **then Claims 15 and 16 would be redundant. And so that just**
:50:18 **underscores the fact that, again, instead of taking just the**
:50:22 **structure needed to carry out the function, they are adding**
:50:27 **additional, unnecessary structure.**
:50:32 **We are getting down to the end of Claim 1 here.**
:50:34 **There is a computing means for computing the**
:50:36 **pre-emphasis coefficients.**
:50:45 **This is another example where we have both extra**
:50:48 **function and extra structure being proposed by the**
:50:54 **defendants. We start with the function. This is really**
:50:59 **very striking.**

:51:04 **The words of the claim are "computing means for computing the pre-emphasis coefficients from the parameters." The defendants want the function to be computing at the transmitting modem pre-emphasis coefficients from said parameters.**

:51:20 **That is not found anywhere in the claim. That is a pure attempt to take the preferred embodiment, which does show, as we saw in Figure 5, it does show the calculation happening at the transmitting modem. But the claim doesn't require that it has to happen there. And their addition of "at the transmitting modem" to this function is just a completely unwarranted attempt to take one feature of the preferred embodiment and make it a claim requirement.**

:51:53 **Then, in addition, they add a lot of structure that's not necessary to the corresponding structure. They have comparator 28 and register 26 and multiplier 30.**

:52:08 **Sort of cutting to the chase here, you know, we think the computation block 48, the function of which is described in the specification, is plenty of structure. To underscore how unnecessary the remaining structures identified by the defendants are, they say multiplier 30 is corresponding structure for the computing means. The specification tells us, in Column 4, as we see here, that multiplier 30 is optional. Well, if it is optional, it**

:52:45 **can't be necessary to carry out the function of calculating.**

:52:50 **So this just shows, again, that they are**

:52:52 **attempting to bulk up the structure with unnecessary**

:52:56 **structures, things that are not needed to carry out the**

:53:00 **claimed function.**

:53:03 **That brings us to the end of the '903 patent.**

:53:08 **We have summarized again on Slide 40 the extra limitations**

:53:11 **that defendants have proposed and that we believe are**

:53:13 **unwarranted.**

:53:14 **THE COURT: Okay. Let's resume at 2:00.**

:53:16 **(Luncheon recess taken.)**

:08:14 **THE COURT: Counsel, please, take your seats.**

:08:22 **MR. DESMARAIS: May I approach, Your Honor?**

:08:25 **THE COURT: Yes, you may.**

:08:35 **All right.**

:08:41 **MR. DESMARAIS: Your Honor, we are on the '903,**

:08:43 **which is the adaptive transmit pre-emphasis for digital**

:08:46 **modem computed from the noise spectrum.**

:08:49 **We do have a difference of opinion on the scope**

:08:51 **of this invention just generally, because, as they tell us**

:08:55 **right in the specification, a lot of this stuff is old.**

:08:58 **Right in the background of the art, they tell us at Column**

:09:01 **1, "It is well-known in the prior art that a transmitter in**

:09:07 **a communications network, particularly a multipoint network,**

:09:10 **should emphasize or amplify certain frequencies so as to**

:09:14 **compensate for frequency-dependent losses in the**
:09:17 **communications process."**
:09:18 **This patent didn't come up with that idea. In**
:09:20 **fact, for certain types of noise here, we see on Column 1,**
:09:23 **"When noise is injected into a communications line**
:09:26 **subsequent to the high-frequency roll-off of the**
:09:27 **communications line, the prior art methods of**
:09:30 **frequency-dependent analysis of the total energy received is**
:09:34 **adequate..."**
:09:35 **Not only were there prior art ways of doing it,**
:09:38 **the inventors themselves indicated that the prior art ways**
:09:42 **of doing it were, in fact, adequate.**
:09:46 **Slide 6.**
:09:52 **What happened in this invention was a very**
:09:53 **specific way of doing it, and we see this in the objects and**
:09:56 **summary of the invention at Column 2, Line 45: "This**
:10:00 **apparatus and method uses a noise spectrum generator circuit**
:10:04 **to calculate a frequency-dependent noise spectrum."**
:10:08 **"The transmitter uses this information to**
:10:10 **compute the new pre-emphasis coefficients from its own**
:10:13 **transmitted spectrum as seen by the receiver and uses the**
:10:16 **result on its subsequent transmission."**
:10:19 **You see in Figure 4 what the invention really**
:10:22 **was about was this noise spectrum generator circuit which**
:10:27 **generates a noise spectrum. What you see on the right**

:10:30 **coming out of Figure 4 is something the patent calls a noise**
:10:34 **spectrum. You can see in Figure 4, what the patent calls a**
:10:42 **noise spectrum is right here, coming out of the noise**
:10:48 **generator circuit.**
:10:51 **Rembrandt wants to say that the noise spectrum**
:10:54 **is back here, when the patent itself tells you what the**
:10:57 **noise spectrum is and where it is generating.**
:11:00 **If we look at the slide from Rembrandt's**
:11:03 **presentation, this is from their tutorial, Slide 25,**
:11:08 **contrary to Figure 4, they want to label the noise**
:11:12 **spectrum -- this is Rembrandt's slide -- they want to label**
:11:15 **the noise spectrum back here. In fact, that's what they do**
:11:18 **all throughout their constructions. The patent tells us**
:11:21 **it's here, and this circuit generates it. But they want to**
:11:25 **label it here.**
:11:26 **So I think there is a fundamental disconnect**
:11:28 **here on what the science in this case is all about. So I**
:11:32 **would like to spend just a minute talking about what a**
:11:35 **spectrum is.**
:11:38 **The patent teaches us -- this is my poor attempt**
:11:44 **at a handwritten graph.**
:11:48 **THE COURT: Is this your expert testimony?**
:11:50 **MR. DESMARAIS: No. It is actually described in**
:11:53 **the patent about noise signals versus noise spectrum. I am**
:11:55 **just trying to show by schematics what that means.**

:11:58 **THE COURT: All right.**

:12:00 **MR. DESMARAIS: A noise signal is just, you know, the common parlance, it is a signal over time. Amplitude versus time. This is what we learned in chemistry and physics in high school, that a signal is plotted over time and it's a waveform.**

:12:16 **That is not what a spectrum is. What the patent tells us is you have to take this signal, send it through a discrete Fourier transform, which is the DFT in that figure. What comes out of that is a spectrum, and the spectrum doesn't look like this. The spectrum looks like this. It is a plot of power or amplitude versus frequency. That is what the patent tells us. These are frequency bars. It is not a wave. It is a plot of frequency points versus amplitude or power. They are two very different things.**

:12:47 **Counsel said in his comments, in his argument, that the noise and the frequency were the same thing, they are just different snapshots. That is not right. What the patent tells us is noise is a signal, which is a wave, and what comes out of the spectrum generator is a plot versus frequency.**

:13:04 **That is important as we get into the claim terms, because the first term on Slide 8 is noise spectrum. It's in the claims, 1, 6, 8 and 21.**

:13:19 **If you look at the two competing constructions,**

it's this misunderstanding of the fundamental science concept that creates the difference between these two constructions.

Rembrandt's proposal, which again they say is plain meaning, they say, the noise spectrum is the noise signal values. That is directly contrary to the patent and it's --

THE COURT: I take it that at the meet-and-confer this fundamental difference or misunderstanding was discussed?

MR. DESMARAIS: I assume so, yes. My partner did the meet-and-confer. I assume so.

THE COURT: Because if it is that fundamental --

MR. DESMARAIS: But it is also right in the patent.

THE COURT: -- I am wondering why the Court has to take time with it. Do we have a disagreement on fundamental science, counsel, precepts of science?

MR. ROZENDAAL: I think we agree, Your Honor, on what the Fourier transform does. I think the difference is that, for reasons that are not clear to us, the defendants don't want to call the input a spectrum. They want to call it a noise signal rather than a noise spectrum.

THE COURT: I don't mind reasonable arguments, arguments that are based in science. But I don't want to be

:14:31 **spun. That's my point, in the common parlance.**

:14:34 **MR. DESMARAIS: I agree a hundred percent, Your**
:14:36 **Honor. That why I am discussing this issue.**

:14:43 **Rembrandt is advocating a fundamental**
:14:45 **misunderstanding of the science, and that is why I am**
:14:47 **bringing it up.**

:14:49 **THE COURT: We will find out.**

:14:50 **MR. DESMARAIS: You look at our proposed**
:14:52 **construction of noise spectrum, and this is the plain**
:14:54 **scientific meaning of what a spectrum is. It is a frequency**
:14:58 **domain plot of the noise signals across a range of**
:15:00 **frequencies.**

:15:01 **How do we know that from the evidence in the**
:15:04 **case?**

:15:04 **If you look at just the plain old technical**
:15:07 **dictionaries, a spectrum is a continuous range of**
:15:10 **frequencies. Look at the Webster's. Spectrum: The**
:15:15 **intensity of any radiation or motion displayed as a function**
:15:18 **of frequency or wavelength.**

:15:20 **I actually want to highlight -- I didn't**
:15:23 **highlight this on the chart. I want to highlight what comes**
:15:26 **before, because I think Your Honor will remember from a long**
:15:30 **time ago in high school physics this definition which I**
:15:34 **didn't highlight. It says, in the first definition: A**
:15:38 **series of colored bands dispersed and arranged in the order**

of their respective wavelengths by the passage of white light through a prism.

I think you will remember, we all learned in high school --

THE COURT: It is a long time ago for me, Mr. Desmarais.

MR. DESMARAIS: I drew a graph of it.

THE COURT: That's okay.

MR. DESMARAIS: It is actually a long time ago for me as well. We learned that you take white light and shine it through a prism, and the prism breaks it into the rainbow, red-yellow-orange-green- -- this is then, we were taught, the light spectrum. This is a lightwave or a light signal. You have a signal, which is amplitude versus time, going through a prism. And that changes it into a spectrum.

That's what spectrum means.

We go back to, noise is exactly the same as white light. Noise has that noise signal, which is amplitude versus time. You send it through a Fourier transform, and it changes it to a spectrum, which is broken up by frequencies, exactly like the light prism.

So we know that, from, first of all, the plain dictionary definitions, a spectrum is something which is a range of frequencies or intensity or radiation versus wavelength and frequency. It is also in the patent. If we

look at Slide 12, right in the objects and summary of the invention, it says, "This apparatus and method uses a noise spectrum generator circuit to calculate a frequency-dependent noise spectrum."

Then if we go back to the figure, the circuit generates the noise spectrum here, coming out of the DFT, which is the Fourier. So this DFT is the prism, if you were dealing with light. It takes the signal. You send it through the prism. And it comes out as a noise spectrum.

That is actually described, if we look at Slide 13, at Column 3, Line 42. "Complex DFT block 68 converts the phase corrected noise signals in the time domain," which are successive values corresponding to successive frequencies," into the noise spectrum in the frequency domain."

The patent is telling us exactly what fundamental science tells us. You take noise signals, which is that time waveform, you put it into the DFT, and it is transformed into a spectrum, which is a frequency plot. And then they give us more description at Column 4: "The noise spectrum generator circuit 50, including the complex DFT block 68, calculates a frequency spectrum."

So the patent is using the terms in exactly the way common high school science tells us the terms were used. Yet when you look at how Rembrandt is interpreting the

claims, contrary to the figure, which tells us the spectrum is here, they are saying you have the spectrum here and before, which doesn't make any sense in the context of the invention.

So when you go back, then, to the competing constructions on Slide 10, when we are interpreting noise spectrum, it is a frequency domain plot of the noise signals across a range of frequencies. It is not noise signal values. Noise signal value is what is going into the DFT. What is coming out of the DFT is the noise spectrum.

The next term that I want to talk about is on Slide 14, "Generating parameters responsive to said noise spectrum." You see that in Claim 1 and some of the other claims are related terms.

Then, if we look at the competing constructions, our construction is, "generating parameters by choosing points of a noise spectrum of said output," which comes right from the patent, and I will show you. And Rembrandt's proposed construction is, "generating values based upon the noise spectrum of the signal received from the transmitting modem."

But if you look at how they do it in the patent, they are actually quite specific. It's at Slide 17. Once you get the spectrum plot, which is the thing that I am going to show you looks like this, once you get this

spectrum plot, you see, then, at Column 4, we go back to Slide 17, "The frequencies are chosen from a 22 point discrete Fourier transform calculation so as to span the usable frequency."

You get the frequency plot, and of the 22 points on that graph, you choose the ones you are going to use in the calculation. And that's what it means to generate parameters responsive to the noise spectrum.

If we go back to the competing constructions, generating parameters responsive to the noise spectrum, ours is directly from the patent specification: generating parameters by choosing points of a noise spectrum of said output.

Then if we jump to Slide 39, which is another term that deals with the same issue, "generating means for generating parameters responsive to a noise spectrum of said output," so this is a means plus function, we will do the claim function first. What does it mean to generate a means for generating parameters responsive to noise spectrum? That is the term we just dealt with. And our definition exactly tracks that other one. That is why I am including this together. The function is generating parameters by choosing points of a noise spectrum of said output.

Rembrandt's again is broader than that, goes away from what the claimed invention was. We see that here

on Column 4: "These frequencies are chosen from a 22 discrete Fourier transform calculation so as to span," it goes on. It is the same quote we talked about before.

That issue carries through on both of these claim terms.

Then, because it's means plus function, we have to look at the structure, too. The structure, I think we may have the same structure, although cited differently. Let me put this up and show you. Our proposed structure is the noise spectrum generator circuit 50, including that complex DFT block 68. This goes back to the same point that I was making earlier, that what we are interpreting is the generating means for generating parameters responsive to a noise spectrum of said output.

If we go back to the figure, the noise spectrum comes out of 68, which is this DFT block. You can't be doing this function if you don't have block 68. And Rembrandt appears to agree with that, because they have cited Figure 4, 68. But then if you look what happened, they are also citing Column 3, Lines 41 to 45, and Column 4, 55 to 56, which, if you actually look at what that is, it is exactly what we put in ours in words.

So I am not sure there is a disconnect in the structure as much as just having it be phrased incorrectly -- excuse me, phrased differently. But it looks

like we have an agreement on the structure. So the only real issue is the function. Are we choosing these parameters? Which, for our point, comes right from the specification.

If we look at Slide 44, we will go to the next term, which is "means for calculating said noise spectrum." This will go quickly because it's very similar. If you look at the competing constructions, our proposed construction, "calculating noise signals of said output in the time domain and converting them into a spectrum in the frequency domain," that's exactly what is happening in the patent. And Rembrandt's proposal, "calculating said noise spectrum of said output."

They are not very different from the point of view of the science if we give noise spectrum the proper interpretation, which is the frequency domain plot.

Then if we look at the structure --

THE COURT: I am wondering, I had some difficulty with both parties' proposals. We are talking about generating parameters responsive to said noise spectrum of said output?

MR. DESMARAIS: We can go back to that one on Slide 41. Yes. Means for generating parameters responsive to the noise spectrum.

THE COURT: I am just not sure whether either

party's proposals really offer a definition of the term -- I may be not on the same term. I wanted to make sure we were talking about the same thing.

MR. DESMARAIS: Going back to the one I think you are talking about...

THE COURT: I am probably behind you.

You will forgive me. I have things in a different order than the parties. What I am specifically wondering about right now is generating parameters responsive to said noise spectrum of said output.

MR. DESMARAIS: That is the one I have moved to.

THE COURT: You have gotten it, okay. So then the note that I have is: Regards both parties' definitions and whether this wouldn't be an occasion where, indeed, plain and ordinary meaning might be the best way to go.

MR. DESMARAIS: I think, for this particular one, for the function, plain and ordinary meaning would be fine. But --

THE COURT: I guess that is what I am asking, to be more specific.

MR. DESMARAIS: For the function. Because it's means plus function, we have to interpret it because we have to do the structure. We don't have to change the function, is what I am telling you. I am agreeing with you on that. But it doesn't mean we don't have to interpret the term,

:26:11 **because then we have to then go to what is the structure**
:26:14 **that does that function.**
:26:15 **THE COURT: Okay.**
:26:16 **MR. DESMARAIS: So if we went with plain meaning**
:26:20 **on the claim function, it doesn't change what I was saying**
:26:23 **about the structure, that was this slide, 43, where the**
:26:27 **structure for that, I believe the parties are very close in**
:26:32 **what they are doing, because we have both put -- they did it**
:26:36 **in words, a discrete Fourier transform circuit or the**
:26:40 **equivalents, Figure 4, 68, we called out exactly Figure 4,**
:26:44 **block 68. Then the text description tells you exactly what**
:26:47 **that means. They cited the text. We wrote it out. So I**
:26:51 **think we are doing the same thing.**
:26:53 **Then going on to the next one, which is Slide**
:26:57 **44, "means for calculating said noise spectrum of said**
:27:00 **output," we see that in Claim 1 and some of the other**
:27:05 **claims. And then this is where I was comparing the two**
:27:10 **proposed constructions. Again, this is what I was saying.**
:27:17 **Rembrandt's, while it doesn't make it as clear as ours,**
:27:20 **isn't wrong, depending on how you define noise spectrum. If**
:27:23 **they are saying the noise spectrum means noise signals, then**
:27:26 **their function is clearly wrong, because that is not how**
:27:30 **this works. If noise spectrum actually means noise**
:27:34 **spectrum, which is the plot versus frequency, then their**
:27:34 **proposed function is probably okay.**

Our construction is responding to their definition of noise spectrum, because noise spectrum is the way they have construed it, as a matter of science, totally wrong.

Then, if we go to the structure for this means-plus-function element, here, so we are looking at calculating, means for calculating said noise spectrum of said output, now, we know the way that the noise spectrum is calculated is here in Figure 4. This is the noise spectrum generator circuit. And the noise spectrum comes out here. This is calculating it. And yet if you look at Rembrandt's proposal, they only put Figure 4, element 50, and Figure 5, element 24. They leave out all of the pieces of Figure 4 that are actually calculating the noise spectrum.

So what we have done in ours, the noise spectrum generator circuit 50, including the -- we put the different pieces, which all that is is an articulation of the pieces that are right here in Figure 4 which are necessary to get the noise spectrum output here from the DFT.

They totally exclude the DFT, where the patent tells us expressly that the noise spectrum comes out of the DFT.

Then you look at Rembrandt's proposed structure, they don't even list the DFT. I don't know how that can be right.

:29:09 **Lastly, on just the general theme of their**
:29:13 **constructions, not this one in particular, but some of the**
:29:16 **other means-plus-function elements that they were talking**
:29:20 **about in their comments, they said time and time again there**
:29:24 **were dependent claims that had further amplifications of the**
:29:29 **structure, and therefore, when they do the structure for the**
:29:31 **independent claim, they need to back out from that**
:29:35 **corresponding structure structure that would go just to the**
:29:38 **dependent claims. That is totally wrong in the context of**
:29:41 **means-plus-function claims.**
:29:43 **I can show you some excerpts from cases. This**
:29:45 **one in particular is the Nomos Corporation v. Brainlab case,**
:29:53 **which, by the way, is a great name for a company, as an**
:29:57 **aside, but it is Federal Circuit February 2004. They hit**
:30:00 **that issue directly on point. By the way, this is just one**
:30:03 **case. There are many Federal Circuit cases that say this.**
:30:07 **"Nomos counters that Limitation A of Claim 1 should not be**
:30:10 **interpreted so as to include a fixation device because**
:30:15 **dependent Claim 3 claims a means for mounting.**
:30:19 **"This argument, which relies on the concept of**
:30:21 **claim differentiation, is unavailing. First, as in Laitram,**
:30:26 **our interpretation of the corresponding structure comes from**
:30:29 **the written description, not from dependent Claim 3. And,**
:30:32 **therefore, the prohibition against reading limitations from**
:30:35 **a dependent claim into the independent claim is not**

:30:38 **violated.**

:30:39 **"Second, claim differentiation, which is a**
:30:42 **guide, not a rigid rule, does not override the requirements**
:30:45 **of Section 112(6) when the claim will bear only one**
:30:48 **interpretation."**

:30:50 **Here is the key point, which is exactly our**
:30:52 **case:**

:30:53 **"In this case, only one embodiment is described**
:30:55 **in the '026 patent. Therefore, the corresponding structure**
:30:59 **is limited to this embodiment and its equivalents."**

:31:03 **What we have in these particular patents,**
:31:05 **especially in this patent, is one spectrum generating**
:31:11 **circuit 50 and one DFT. And that's the only embodiment in**
:31:16 **this patent. And the different means clauses in the**
:31:19 **independent claims, that's the corresponding structure.**

:31:22 **If you have a dependent claim that then calls**
:31:25 **out augmented functions, it doesn't matter, because those**
:31:29 **functions were performed in the one and only circuit that is**
:31:33 **in the patent.**

:31:34 **Their arguments about claim differentiation,**
:31:36 **especially for this patent, don't apply in the**
:31:39 **means-plus-function context, which these claims are.**

:31:42 **I should probably read that cite into the**
:31:45 **record. Nomos Corporation v. Brainlab, 357 Federal Reporter**
:31:49 **3d, at Page 1364. I read from Page 1368.**

:31:56 **So that's all I wanted to say on this patent.**
:31:58 **The fundamental issue that drives most of the constructions**
:32:01 **is, what is a noise signal versus what is a noise spectrum.**
:32:04 **THE COURT: Thanks, Mr. Desmarais.**
:32:08 **Counsel. You have got this fundamental dispute**
:32:12 **over science?**
:32:12 **MR. ROZENDAAL: Your Honor, I don't think it is**
:32:13 **a dispute over science. I think it is a dispute over**
:32:16 **terminology.**
:32:19 **I think we agree that the science is such that**
:32:22 **what goes into box 68 that comes out of the calculating**
:32:32 **circuit 50 is is information about the noise plotted against**
:32:43 **time. And what comes out of discrete Fourier transform**
:32:48 **block 68 is information about the noise plotted against**
:32:52 **frequency.**
:32:53 **We agree that that is a noise spectrum. We**
:32:57 **think that, because it is exactly the same information**
:32:59 **represented differently, what goes in is also a noise**
:33:02 **spectrum. It is a little bit like saying, you know, before**
:33:05 **the revisions to the Federal Rules, res judicata was a**
:33:09 **concept and now the rules call it claim preclusion. It's**
:33:12 **the same thing. It's got a different name. Here we have**
:33:14 **the same thing, the same set of information represented**
:33:18 **differently. And our point is simply that the defendants**
:33:20 **are putting an emphasis on the words signal and spectrum**

:33:25 **that is greater than is justified by the underlying science.**

:33:29 **You have got the same information represented**
:33:30 **two different ways, and they are saying, well, because it**
:33:34 **says spectrum here and it doesn't say anything here, it must**
:33:38 **be something completely different. Our point is that, you**
:33:41 **know, if you call it a signal or you call it a spectrum, it**
:33:43 **is the same thing. What matters is whether it is plotted**
:33:45 **against time or plotted against frequency. We do agree that**
:33:48 **by the time it comes out of box 68 it's plotted against**
:33:52 **frequency.**

:33:52 **THE COURT: Mr. Desmarais, is there a**
:33:53 **disagreement?**

:33:55 **MR. DESMARAIS: There is a disagreement, for**
:33:57 **this reason, Your Honor. The way the claims are written,**
:34:01 **they require that you have a noise spectrum, which is what**
:34:07 **comes out here, is a noise spectrum, which is amplitude**
:34:12 **versus frequency.**

:34:14 **What Rembrandt is trying to do is say that the**
:34:19 **noise signal, which is amplitude versus time, is the noise**
:34:23 **spectrum. And they are interpreting the claim terms in the**
:34:26 **claim where it says noise spectrum, they are interpreting**
:34:30 **that, their proposed construction is to change noise**
:34:33 **spectrum to noise signal.**

:34:35 **So they are trying to change the claim language**
:34:38 **to capture products that don't have a noise spectrum, which**

:34:44 **is noise versus frequency.**

:34:45 **Let me put it to you in more concrete terms.**

:34:48 **See this complex DFT 68. We don't have one of**

:34:51 **those. We do not change noise signals, which is noise**

:34:58 **versus time on that wave. We don't change those to a noise**

:35:02 **spectrum, which is noise versus frequency.**

:35:05 **So the claims require you to have a noise**

:35:09 **spectrum. So what they are trying to do -- this is what I**

:35:12 **was talking about -- they are trying to say the plain**

:35:13 **meaning of noise spectrum means any noise signal. And**

:35:17 **that's wrong as a matter of science. Why are they trying to**

:35:20 **do that? Because they want to capture products that don't**

:35:23 **have the DFT, that don't convert signals to frequency plots.**

:35:29 **They are trying to take their invention and broaden it out**

:35:32 **to capture things that aren't even doing what they invented.**

:35:35 **What they invented is taking noise signals, putting them**

:35:38 **through what's called the discrete Fourier transform,**

:35:42 **changing them to a spectrum versus frequency. They do that**

:35:46 **for a very scientific reason, which is, once you have that**

:35:50 **frequency plot, then you go in, if you read the**

:35:54 **specification, you go in and you choose five points off the**

:35:55 **frequency plot and you use that five points to go back in**

:35:58 **and augment the particular frequencies that are transmitted.**

:36:01 **If you don't have that discrete Fourier**

:36:03 **transform and you don't create that frequency spectrum, you**

:36:06 **can't do what is in their patent. Their entire invention**
:36:09 **was about that. We don't do it. We don't have it.**
:36:12 **So plain meaning here becomes critical. They**
:36:14 **are saying the plain meaning is one thing, when it's**
:36:17 **fundamentally not.**
:36:18 **THE COURT: Sorry to interrupt like that,**
:36:21 **counsel.**
:36:21 **MR. ROZENDAAL: Your Honor, we take exception to**
:36:23 **the suggestion that the science fundamentally associates the**
:36:29 **word signal with time domain and spectrum with frequency**
:36:32 **domain. The information is the same, and other than some**
:36:37 **extrinsic evidence that they have cobbled together, there is**
:36:40 **no reason to think that information about the noise can't be**
:36:43 **called a noise spectrum, whether it is plotted against time**
:36:46 **or against frequency. And in support of that I would point**
:36:49 **to the slide that Mr. Desmarais put up at the beginning,**
:36:53 **where he -- the beginning of the invention talks about a**
:36:56 **frequency-dependent noise spectrum. We would suggest that**
:37:01 **you wouldn't have to call it a frequency-dependent noise**
:37:04 **spectrum if the word spectrum already meant**
:37:07 **frequency-dependent.**
:37:12 **MR. DESMARAIS: Can I show you one extrinsic**
:37:15 **piece that I think answers the question?**
:37:17 **THE COURT: I will give you a chance to come**
:37:18 **back on this one.**

:37:21 **MR. ROZENDAAL: With regard to the generating**
:37:26 **means, we do agree that box 68, which is the box that does**
:37:36 **exactly the transformation that we were just talking about,**
:37:38 **the transformation from the time domain to the frequency**
:37:41 **domain, the Fourier transform, is the item that generates**
:37:45 **the parameters. So we have common ground on that.**
:37:48 **Where we disagree is on the attempt by the**
:37:51 **defendants to add additional structure that's not required.**
:37:56 **What is required is that there be this**
:37:58 **transformation from time to frequency. What is not required**
:38:01 **is that the parameters chosen from the resulting**
:38:05 **frequency-dependent spectrum be 709, 1145, 1800, 2455 and**
:38:12 **2891 hertz.**
:38:15 **The parameters can be taken from any**
:38:17 **frequencies. If the Court were to read these particular**
:38:20 **frequencies into the claim, or into the corresponding**
:38:24 **structure, which are unnecessary, then we would end up**
:38:26 **having lots of fights later on about whether or not the**
:38:29 **frequencies actually used or the parameters actually used**
:38:32 **are equivalent to these particular frequencies.**
:38:35 **And the reference to the Laitram case or to the**
:38:37 **later case that cited the Laitram case is inapposite,**
:38:41 **because our point -- in Laitram, the situation was there was**
:38:44 **one structure recited in the specification, there was a**
:38:48 **means for, then there was a dependent claim that called out**

:38:51 **the corresponding structure. The effect of applying claim**
:38:55 **differentiation in that context would have been that there**
:38:57 **would have been no structure left at all for the independent**
:38:59 **claim.**
:39:00 **Here we agree that there has to be a discrete**
:39:03 **Fourier transform circuit. But the particular frequencies**
:39:05 **that they want to make part of the corresponding structure**
:39:10 **are not essential.**
:39:10 **So we have a situation here where the evidence**
:39:13 **of the dependent claim confirms that these frequencies are**
:39:17 **not needed as part of the corresponding structure and the**
:39:20 **structure should be limited only to those structures that**
:39:23 **are necessary to carry out the claimed function.**
:39:28 **MR. DESMARAIS: I just want to comment on the**
:39:31 **one point about spectrum, because if you look at what the**
:39:36 **two parties are offering you, they, Rembrandt, have come**
:39:42 **forward with only lawyer argument that a spectrum, a noise**
:39:48 **spectrum and a noise signal are the same. All they have is**
:39:51 **lawyer argument.**
:39:52 **What I have shown you is, number one, the plain**
:39:55 **meaning. I have got Newton's Telecom Dictionary, and I have**
:40:00 **Webster's New World Dictionary. And they both say exactly**
:40:04 **the same thing. They say a spectrum is a continuous range**
:40:07 **of frequencies. They say a spectrum is light going through**
:40:11 **a prism or the intensity of any radiation or motion**

displayed as a function of frequency, or wavelength, which is what I am saying.

So I am supported by the plain-meaning dictionaries. They have brought you no dictionaries.

Then if you look in the specification, the patent uses these terms in only one way, which is the way I am advocating. And it's at Column 3, it says complex DFT, which is the Fourier transform, block 68, converts the phase corrected noise signals in the time domain into the noise spectrum in the frequency domain.

Then they tell you how that happens here, in the noise spectrum generator circuit 50.

You look at how the patent describes noise signal versus noise frequency. It is 100-percent consistent with technical dictionaries. And it is 100-percent consistent with what we learned in high school physics, that if you send a wave or light signal through a prism, it breaks it into a light spectrum.

So these are terms we have some understanding of. The technical dictionaries are entirely consistent. The patent is entirely consistent.

They are trying to change what's in the specification, noise spectrum, into calling it a noise signal. They are trying to change the words here. They are saying, it is a plain meaning, I will call that spectrum a

:41:35 **noise signal. It couldn't be more clear than on their**
:41:39 **demonstrative, where they are taking what comes out of the**
:41:41 **DFT, the noise spectrum, and they are saying actually the**
:41:44 **noise spectrum is back here.**
:41:45 **So from your point of view, what do you have to**
:41:47 **go on? You have got lawyer argument that the figure shows**
:41:51 **you -- their interpretation is contrary to the figure in the**
:41:55 **patent that said spectrum is here. And they are saying, no,**
:41:58 **it's here. And on our side of the argument, you have got**
:42:01 **your high school physics, lightwave, you have the technical**
:42:06 **dictionaries, and you have the express description in the**
:42:09 **specification that says noise signals go in, noise spectrum**
:42:12 **comes out. A hundred-percent consistent with the figures.**
:42:15 **THE COURT: You have the last word, plaintiff.**
:42:18 **MR. ROZENDAAL: I will make it a short one, Your**
:42:20 **Honor.**
:42:21 **Mr. Desmarais's own demonstrative points to a**
:42:25 **frequency-dependent noise spectrum. If the word spectrum**
:42:29 **meant frequency-dependent, then that would be a redundant**
:42:33 **expression. We don't think that's what the inventor**
:42:35 **intended.**
:42:37 **THE COURT: All right. What's next?**
:42:40 **MR. ROZENDAAL: I believe the '444 is next.**
:42:43 **THE COURT: Okay.**
:42:46 **MR. ROZENDAAL: And last.**

:42:59 **May I approach, Your Honor?**

:43:05 **THE COURT: Yes.**

:43:11 **MR. ROZENDAAL: All right. The '444 patent, we have labeled the robust preamble patent, for reasons that will become apparent in just a moment. The problem that the patent addresses is that a modem waiting for the end of a period of silence on a transmission line needs to be able to distinguish an actual message from silence. And silence in the context of a modem is usually not complete silence. There is usually a carrier signal and there is some noise on the signal. And it may be difficult for the modem to distinguish noise on the signal from an actual message being transmitted.**

:44:02 **So the trick is to find a way to indicate the beginning of a message clearly and reliably so that the modem knows to pay attention, essentially.**

:44:13 **And the solution is to add a preamble, add a series of bits to the beginning of the message, of a particular kind, that makes it easier for the modem to distinguish the beginning of a message from silence.**

:44:35 **One of the features of the preamble and indeed the main feature of the preamble in this patent is that it is encoded at a lower bit-per-symbol rate than the body of the message. I am going to explain exactly what that means in just a minute. But to give you an idea of the concept,**

:44:53 **it is akin to speaking more slowly to get someone's**
:44:58 **attention.**
:44:59 **When I was a kid and my mom came into the**
:45:01 **kitchen and said slowly, "John Christopher Rozendaal," she**
:45:06 **would get my attention. The same principle is at work here.**
:45:10 **If you send something clearly and slowly, the modem will**
:45:14 **know that a message is coming.**
:45:17 **The concept of symbols Mr. Seitz touched on**
:45:20 **briefly in his introduction yesterday. Digital information**
:45:24 **exists in the form of 0s and 1s, or bits, binary digits,**
:45:29 **which are 0s and 1s. And you can have a modulation scheme**
:45:32 **in which there are only two different kinds of symbols sent**
:45:36 **across the line, one representing a 0, one representing a 1.**
:45:41 **That would be, for example, I could send messages like this,**
:45:44 **up would be a 1 and down would be a 0, and it would be**
:45:46 **relatively easy to distinguish between those two.**
:45:49 **If we could agree on additional symbols, if we**
:45:51 **could agree on four, for example, so down, sort of part way**
:45:54 **up, mostly up, all the way up, then with four different**
:45:57 **positions, we could convey four symbols which could be used**
:46:01 **to represent two bits of information each, as illustrated**
:46:05 **here on Slide 4.**
:46:06 **So the first one, down could be 00. Part way up**
:46:09 **would be 01. 10. 11 (indicating).**
:46:13 **We have already doubled the transmission speed**

:46:15 **of our communication system, because now you can get twice**
:46:18 **as much information from me each time you read a symbol from**
:46:21 **me.**
:46:21 **If we increase that again to eight symbols, so**
:46:24 **that I have eight different positions (indicating) in which**
:46:28 **I could put my arm, then we would be able to get three**
:46:31 **different bits per symbol. But the problem is the more**
:46:36 **symbols you have, the harder it is to distinguish between**
:46:38 **symbols. If my arm is here, if these are two different**
:46:41 **symbols, you might have trouble distinguishing which one I**
:46:44 **intend, whether I mean 101 or 110. That is particularly**
:46:49 **true if there is noise on the line that is causing my arm to**
:46:52 **shake.**
:46:53 **So it is very advantageous when clarity is**
:46:56 **important to send messages at a low bit symbol rate, which**
:47:00 **relies on fewer symbols.**
:47:03 **We have just an illustration to get the idea**
:47:06 **across of, for symbol rate you could have one set of**
:47:10 **symbols. You could have eight different possible symbols**
:47:12 **that would represent three bits. So each time a symbol came**
:47:15 **across the line, a modem would translate that into three**
:47:18 **distinct bits. Whereas if you have a different set of**
:47:21 **symbols, which there are only four different symbols, that**
:47:25 **would be translated into two bits.**
:47:29 **What the '444 patent teaches is to use a lower**

:47:35 **bit-per-symbol rate on the preamble, on the front part of**
:47:39 **the message, than you use on the main part of the message in**
:47:42 **order to make the preamble more robust, less prone to**
:47:46 **errors, and more clearly interpreted as a preamble.**
:47:50 **These are figures from the patents that**
:47:53 **illustrate the differences between the different kinds of**
:47:58 **bit-per-symbol rates. So in Figure 4A you have the example**
:48:03 **of a two-bit-per-symbol system with four distinct points.**
:48:06 **And in Figure 4B on the right, you have an example of what I**
:48:10 **think is probably a-five-bit-per-symbol system with 32**
:48:15 **distinct points.**
:48:18 **We have arrows showing the distance between the**
:48:21 **points. The point is, you are much less likely to confuse**
:48:24 **the two points here on the left than you are to confuse**
:48:27 **these two points here on the right. That means that the**
:48:29 **lower bit-per-symbol rate on the left is a much more robust**
:48:35 **and error-free way of communicating information.**
:48:37 **This, incidentally, just sort of as an**
:48:41 **interesting aside, this is what happens, the slicer in the**
:48:45 **last patent we talked about, when the signal comes in and it**
:48:48 **gets translated into a set of points, it ends up looking**
:48:52 **something like this, and the error signal, or spectrum, or**
:48:56 **whatever it is going to end up being, is calculated by**
:48:58 **seeing how far off the receive signal is, the receive point**
:49:01 **is, from the point that you know that the other side was**

:49:03 **trying to send. If it is way out here, there is a big error**
:49:07 **signal. If it is close in here, then you know there is not**
:49:10 **much error.**
:49:13 **Now, with the background on symbols, we can turn**
:49:16 **to the description of one embodiment of this invention given**
:49:21 **in the '444 patent. We can line up the main elements of**
:49:25 **Claim 1 with Figures 3A and 3B.**
:49:31 **We start out with a communication message, which**
:49:33 **is illustrated here as a series of different symbols. There**
:49:36 **is a preamble at the first part of the message. There is an**
:49:39 **optional administrative header 42. Then there is a series**
:49:43 **of what in this example are AM cells, which are essentially**
:49:47 **data cells being transferred over the communications line.**
:49:56 **Then the preamble, we can look at in more detail**
:49:59 **in Figure 3B. And the specification tells us that Figure 3B**
:50:09 **is a schematic view illustrating, in further detail, the**
:50:13 **exemplar preamble of Figure 3A. This is really an important**
:50:17 **point. It's an example. It's an exemplar preamble. It is**
:50:20 **not the kind of preamble that has to be on every single**
:50:24 **message in order for this patent to be infringed or for the**
:50:28 **claim to be satisfied.**
:50:29 **What the defendants will tell you when we get to**
:50:30 **it is that every single element of this Figure 3B has to be**
:50:35 **present in the claim, which is simply not true. This is**
:50:39 **just an example. This is one embodiment.**

:50:44 **The specification tells us that the preamble includes a plurality of bits that represent communication link control information or CLCI, as the patent calls it. This is information about the communication link, which may include, and then the example given here includes the transmission rate, the receive rate -- and this is the rate at which the modem that is now doing the sending is willing to receive messages back. That's what is meant by the receive rate here -- address information, possibly additional formatting information. Those are things that could be in the preamble.**

:51:22 **Another feature of the example preamble that is given here is that the first symbol is boosted by three decibels. That means that the signal strength applied to the beginning of the message is significantly greater, in fact, three decibels basically means doubling the power on the first symbol to clearly indicate the beginning of the message. This is like if you had a beacon in the fog, you made it twice as bright to indicate the beginning of the message to, again, get the modem's attention.**

:51:53 **There are dependent claims that specifically make reference to this feature that talk about increasing the energy of the first symbol, in the preamble. It is not a requirement of all of the claims, however. And as we will see, the defendants try to read this limitation into**

:52:10 **everything, when, in fact, it is just an example and there**
:52:12 **are some dependent claims that cover it but it doesn't**
:52:15 **belong to every claim.**
:52:18 **Then the claim tells us that the preamble is**
:52:24 **encoded at a lower bit-per-symbol rate relative to the**
:52:29 **maximum rate capable of being supported over the**
:52:33 **communications channel. Again, this is the idea that by**
:52:35 **making the preamble more clear and less prone to error, you**
:52:38 **increase the chances that the modem will accurately**
:52:41 **distinguish the beginning of the message as contrasted with**
:52:46 **the silence.**
:52:47 **Again, the example given here is two bits per**
:52:51 **symbol. It could be any low bit rate, as the specification**
:52:55 **tells us.**
:52:56 **So to summarize the key points of the invention**
:52:59 **as they are found in the abstract, using a lower symbol rate**
:53:06 **in the preamble reduces error and clearly and reliably**
:53:10 **delimits the beginning of the transmission. And an**
:53:14 **alternative additional way of delimiting the beginning of**
:53:18 **the transmission that is not required all the time would be**
:53:20 **to boost the power of the first symbol or of the preamble.**
:53:28 **So with that introduction, we can dive into the**
:53:30 **claims.**
:53:32 **Rembrandt has requested construction of two**
:53:34 **claim terms. We think that the rest can be handled with**

:53:37 **plain meaning. The defendants have requested construction**
:53:39 **of seven terms. And there are three main points with which**
:53:45 **we take issue that we would like to address today.**
:53:49 **The defendants would improperly require that**
:53:51 **every message preamble begin with a first symbol transmitted**
:53:55 **at a higher power than subsequent preamble symbols. There**
:53:59 **are actually two problems with that. One is not only that**
:54:02 **they would require it everywhere and not just in the**
:54:04 **dependent claims. The other thing is that they would**
:54:07 **require, where this boosting technique is used, that it**
:54:10 **apply only to the first symbol of the preamble, and not to**
:54:14 **subsequent symbols of the preamble, which is inconsistent**
:54:19 **with the specification.**
:54:22 **They would also require that every message**
:54:24 **preamble contain precisely the same information shown in the**
:54:28 **example preamble in Figure 3B. And they would require that**
:54:32 **the bit-per-symbol rate in the preamble be limited to two**
:54:35 **bits per symbol, even though the specification expressly**
:54:38 **uses that rate for purposes of illustration only.**
:54:45 **Okay. So we can now dive into Claim 1. We have**
:54:50 **a system for robust transmission delimiting, comprising a**
:54:54 **communication message including a preamble, the preamble**
:54:57 **operating to frame the message and to delimit the message**
:55:00 **from silence. Again, the idea here being to cleanly**
:55:04 **indicate the start of a message.**

:55:12 **And we think that framing the message and**
:55:14 **delimiting it from silence is something that the jury can**
:55:17 **understand without further elaboration. The defendants take**
:55:19 **this opportunity to require that the preamble include a**
:55:25 **first symbol transmitted at a higher power level than all**
:55:28 **other preamble symbols, again, not just higher than the rest**
:55:32 **of the message, but higher than other preamble symbols,**
:55:35 **which is something not found in the specification. And they**
:55:39 **also require that communication link control information**
:55:44 **appear in the preamble and be used to precisely identify the**
:55:47 **end of the message. Not the beginning of the message, but**
:55:50 **the end of the message.**
:55:54 **The claim does not require that the preamble**
:55:56 **include a first symbol transmitted at a higher power level**
:55:59 **than all the other preamble symbols. First of all, the**
:56:03 **patent states that the first symbol can be sent using an**
:56:05 **increased power level. That is optional. It is not in**
:56:08 **every preamble. The claims distinguish between preambles**
:56:11 **that have this boosting feature and those that don't.**
:56:14 **Claims 24 and 35 use this boost, signal boost. But Claims 1**
:56:21 **and 23, for example, do not.**
:56:24 **So by simple claim differentiation, that should**
:56:27 **not be read into Claims 1 and 23. And even where there is**
:56:31 **boosting, as in Claims 24 and 35, the first symbol has to be**
:56:35 **boosted, but the claim doesn't say that only the first**

:56:39 **symbol can be boosted. I think what we will find is that**
:56:43 **the defendants boost more than just the first symbol. They**
:56:47 **boost a bigger part of the preamble or perhaps all of the**
:56:51 **preamble relative to the body of the message, and they are**
:56:53 **trying to interpret this in a way that will cause their**
:56:57 **systems to fall outside the scope of the claim.**
:57:00 **The patent does not require that the preamble**
:57:03 **contain information used to identify the end of the message.**
:57:07 **In Claims 1 and 23, the key information is the beginning of**
:57:13 **the message. There are other claims, Claims 11 and 22 talk**
:57:17 **about the end of the message using information to delimit**
:57:21 **the end of the message. But again, under standard claim**
:57:24 **differentiation, those limitations should not be read into**
:57:27 **the claims where they don't belong.**
:57:33 **Then we get into the issue of communication link**
:57:36 **control information. And Rembrandt submits that**
:57:45 **communication link control information is a programmable**
:57:48 **pattern of bits to convey information regarding the**
:57:52 **communication. Whereas the defendants want to take exactly**
:57:55 **the sets of bits that are described in Figure 3B and read**
:57:58 **them into every single preamble that's ever going to be used**
:58:03 **with this patent.**
:58:06 **And then we have sort of an odd terminological**
:58:12 **fight about the claims to be construed. Rembrandt has**
:58:15 **proposed construing communication link control information.**

:58:18 **The defendants have insisted on construing a plurality of**
:58:21 **bits representing communication link control information.**
:58:23 **They then actually propose the same definition for both of**
:58:26 **those terms, adding to the confusion. To the extent there**
:58:30 **is any distinction, we would say a plurality of bits or just**
:58:33 **multiple bits. I don't think that is a point that should**
:58:36 **cause the Court much trouble.**
:58:38 **The main point is that Figure 3B, which**
:58:43 **defendants would read into the claim, is merely an exemplar**
:58:46 **preamble. It is an example. It is a sample. It is one way**
:58:49 **of doing it.**
:58:50 **The example, when it is described, it says the**
:58:53 **example includes information regarding the transmit rate.**
:58:55 **It includes information regarding the receive rate.**
:58:59 **That is why we say it includes information**
:59:04 **regarding the communication. That is our definition of**
:59:07 **communication link control information. So we take that**
:59:13 **right from the specification. And the defendants would**
:59:15 **require that the CLCI only include and always include the**
:59:20 **particular information in Figure 3B.**
:59:26 **All right. Now we can move on to the encoder**
:59:34 **which encodes the preamble bits into symbols with the symbol**
:59:38 **indices being encoded at a lower bit-per-symbol rate in the**
:59:43 **preamble.**
:59:43 **Now, the question then becomes lower than what?**

:59:47 **And the claim says lower than the maximum rate capable of**
:59:53 **being supported over a communication channel. The**
:59:57 **defendants interpret that to mean the maximum receive rate**
:00:01 **specified in the preamble that was just received.**
:00:05 **As I mentioned when we were going through Figure**
:00:08 **3B, the maximum receive rate, first of all, doesn't have to**
:00:11 **be specified in the preamble at all because that's just one**
:00:14 **element from Figure 3B that the defendants are reading in**
:00:17 **there that doesn't have to be in there.**
:00:32 **The information in the exemplar preamble about**
:00:35 **the receive rate means the rate at which the transmitting**
:00:39 **modem is willing to receive information back, which may or**
:00:43 **may not correspond to the maximum rate that can be sent over**
:00:47 **the communications channel. So if you had a very fast modem**
:00:50 **and a very narrow or congested channel, then the receive**
:00:55 **rate specified in the preamble, if it were going to be**
:00:59 **specified at all, would not correspond to the maximum**
:01:03 **capable of being supported over the channel.**
:01:05 **The claim talks about the communications**
:01:06 **channel. The receive rate that the defendants identify**
:01:09 **talks about the transmitting modem, and not the channel.**
:01:13 **And, as I mentioned, the receive rate doesn't have to be in**
:01:16 **the preamble at all. That is just an example.**
:01:19 **So this is an attempt by the defendants to sort**
:01:23 **of cement their inclusion of this specific information from**

:01:27 **Figure 3B into the claims where it doesn't belong.**

:01:30 **All right. Having identified -- I will**
:01:35 **anticipate comments on our definition on this. I will point**
:01:38 **to it right now.**

:01:40 **We have interpreted the maximum rate capable of**
:01:42 **being supported over a communications channel as the highest**
:01:44 **bit-per-symbol rate at which the data portion of the message**
:01:48 **is sent. I think it would be grammatically more accurate to**
:01:53 **say at which the message can be sent, because this talks**
:01:56 **about capable of being supported.**

:01:58 **In any event, the point is, if you are sending**
:02:00 **the message over the communications channel, then you know**
:02:02 **that the channel can support that bit rate. As long as your**
:02:08 **encoding of the preamble is lower than that rate, you will**
:02:12 **be sure to satisfy the condition that it be lower than the**
:02:15 **maximum rate capable of being supported over the channel.**

:02:20 **THE COURT: Let me ask you, just to go back to**
:02:38 **Slide 24. Try this, I would like to get your reaction. I**
:02:47 **will get the same from Mr. Desmarais: An encoder converts**
:02:51 **the preamble bits into symbols at a lower bit-to-symbol rate**
:02:57 **than the maximum rate capable of being supported over a**
:03:01 **communication channel.**

:03:02 **Would you like me to read that again?**

:03:08 **MR. ROZENDAAL: Please do, yes.**

:03:10 **THE COURT: It is taking part of the defendants'**

:03:12 **proposed instruction and adding, I guess, a bit of a**
:03:19 **difference. It may be a major difference.**
:03:22 **An encoder converts the preamble bits into**
:03:24 **symbols at a lower bit-to-symbol rate than the maximum rate**
:03:28 **capable of being supported over a communication channel.**
:03:34 **MR. ROZENDAAL: I think we are fine with that,**
:03:36 **Your Honor.**
:03:38 **THE COURT: All right.**
:03:52 **MR. ROZENDAAL: Okay. Now we are ready to leave**
:03:55 **Claim 1, go to dependent Claim 23 and talk about a couple of**
:04:00 **means-plus-function terms.**
:04:06 **In Claim 23, there is a means for applying a**
:04:09 **preamble to a communication message, the preamble including**
:04:12 **a plurality of bits representing communication link control**
:04:17 **information.**
:04:18 **Now, our first disagreement with the defendants**
:04:21 **on this point is what the function is. It's pretty clear**
:04:26 **from the text that applying the preamble to the**
:04:30 **communications message is what the means is doing. If the**
:04:34 **Court will look at Claim 23, I don't have a slide with it up**
:04:37 **here, but you will see that what they have ellipse'd out of**
:04:41 **their term is words from Claim 1 about framing the message**
:04:47 **and delimiting it from silence, which they don't purport to**
:04:51 **include in their function. Then they skip down further into**
:04:54 **the claim. Having omitted that part of the function, they**

then come back and say, oh, well, this other stuff that the preamble does is also part of the function, and so that ought to be construed. It is really I think an unfortunate parsing of the claim on their part.

What you have to do is apply the preamble to the communications message. If that is the function, then, as you will see, all you need is, in the embodiment shown for corresponding structure, this Figure 8 of the patent shows an encoder. The encoder is controlled by this transmission sequencer. The sequencer 236 controls this long vertical item 224, which is the multiplexer, and by deciding which of the inputs, sort of the left-hand inputs into the multiplexer go out on the communication line, you control what is going out on the communication line.

So here, to attach the preamble, what you do is the sequencer tells the multiplexer, take the preamble from one of these two inputs, take the preamble, and send it out, and then take the message and send it out. And by controlling this multiplexer, you take the preamble from here and then you take the message from here, you take the preamble from Lines 226 or 228, and then take the message from Lines 257 or 256. That's how you attach the preamble to the front of the message.

What the defendants would like is to take this occasion to try to cement -- what they point to is this

:06:36 **structure over here, which is a different multiplexer that**
:06:39 **assembles the preamble. And they don't even have structure**
:06:42 **that attaches the preamble to the front of the message,**
:06:44 **which is the function --**
:06:46 **THE COURT: Let me ask you this, Mr. Rozendaal:**
:06:49 **Consider the following structure. Transmit sequence at 236,**
:06:54 **multiplexer 214, transmit rate element 206, and I will add**
:06:59 **224, and equivalents.**
:07:04 **MR. ROZENDAAL: Your Honor, we would object to**
:07:05 **the inclusion of 214.**
:07:08 **THE COURT: Why would that be?**
:07:10 **MR. ROZENDAAL: That would be because 214 is not**
:07:13 **what affixes the preamble to the beginning of the message.**
:07:16 **214 determines what elements will go into the preamble,**
:07:20 **which is not the function that we are concerned with in this**
:07:22 **particular point of the claim.**
:07:33 **THE COURT: So, then, transmit sequencer 236,**
:07:40 **multiplexer 224.**
:07:42 **MR. ROZENDAAL: That would be it, Your Honor.**
:07:44 **THE COURT: Transmit rate element 206 and**
:07:49 **equivalents.**
:07:49 **MR. ROZENDAAL: 206, no, Your Honor. 206,**
:07:52 **again, it is over here on the left. That's part of what**
:07:57 **goes -- what may or may not go into the preamble.**
:07:59 **THE COURT: Okay.**

:08:06 **MR. ROZENDAAL: All right. We have got one more**
:08:08 **means-plus-function element, which is the means for encoding**
:08:15 **the preamble bits into a plurality of symbol indices. We**
:08:27 **have a disagreement about the maximum rate capable of being**
:08:31 **transmitted over a communications channel. Again, that is**
:08:34 **just the same fight we had before appearing now in Claim 23.**
:08:38 **The structure, we agree, should be the preamble encoder 219.**
:08:46 **And this is similar to the disagreement we had in the last**
:08:50 **patent about the degree of whether the specific frequencies**
:08:54 **have to be included to carry out the function. Again, we**
:08:57 **have a situation where we agree there has to be an encoder,**
:09:00 **and it has to be a preamble encoder, and that's what we have**
:09:02 **here in Box 219. However, the patent makes it clear that**
:09:07 **the two-bit-per-symbol rate encoding shown in the disclosed**
:09:11 **embodiment is for purposes of illustration only. We see**
:09:14 **that expressly in the specification. And the patent tells**
:09:17 **us that any other low bit-per-symbol rate can be used with**
:09:20 **similar rates.**
:09:21 **So as long as we don't stick in particular**
:09:24 **bit-per-symbol rates here, we are fine with a preamble**
:09:27 **encoder.**
:09:28 **And that would bring us to the end of the last**
:09:31 **patent.**
:09:33 **THE COURT: Okay. Mr. Desmarais.**
:09:35 **MR. DESMARAIS: Thank you, Your Honor. I am**

:09:41 **excited to say that we are almost done. The '444 patent.**
:10:04 **Okay. We will jump to the first term at Tab 1, which is**
:10:09 **Slide 6.**
:10:50 **So Claim 1, "The preamble operating to frame the**
:10:52 **message and to delimit the message from silence." It's in**
:10:56 **all the independent claims. If you look at the competing**
:11:00 **constructions, Rembrandt's construction just essentially**
:11:05 **repeats the claim language. They say, "an initial pattern**
:11:10 **of bits to frame the message and still limit the message**
:11:13 **from silence." Essentially, they are just saying leave the**
:11:16 **claim the way it is. It doesn't tell us what it means to**
:11:19 **frame the message and to delimit the message from silence.**
:11:23 **The jury is not going to understand what that**
:11:25 **means. The patent tells us what it means, though.**
:11:28 **If you look at Column 7, Column 10 and Column**
:11:32 **12, as we laid out here, we can go one at that time. The**
:11:35 **patent tells us, "In accordance with another aspect of the**
:11:38 **invention, the first symbol 55 representing the first bits**
:11:41 **in the preamble 40 can be sent using an increased power**
:11:46 **level, thereby clearly and robustly delimiting the beginning**
:11:49 **of the communication message 31."**
:11:52 **So it's telling us, what does limiting mean? It**
:11:56 **means increasing the power level of the first bits. That's**
:11:59 **what they tell us. You will see it in the next section, if**
:12:02 **we go back out, Column 10. "In accordance with another**

aspect of the invention, the first symbol 55 is encoded at a rate of two bits per symbol and has its energy increased to a point at which noise on the communication channel is unlikely to cause a receiver to erroneously interpret the first symbol 55 as silence."

So what it is telling us is, when we use the phrase to delimit from silence, what we are telling you is we are increasing the energy level so that this first symbol is very different from the noise. That's what we mean in this patent by delimiting from science. Later on they say, "In this manner, the beginning of each transmission can be clearly and robustly delimited."

Lastly, Claim 12, "In accordance with an aspect of the invention..."

So each time, they are saying, this is the invention, this is the invention. "...the first symbol 55 of Figure 3B in the preamble 40 is transmitted with increased energy, thereby increasing the probability that it will be reliably detected by the decoder of the receiving device. In this manner, the beginning of each transmission is clearly and robustly delimited."

Delimited is not an every-day term. It is not a term the jury is going to understand. What it means in this claim, what it means in this patent, is to boost the energy of the first symbol so that you make it very different from

:13:21 **the noise on the channel. There is no other definition in**
:13:24 **the specification and there is no other way to do it.**
:13:27 **Then when you look at the figures, that's**
:13:28 **clearly what they show in Figure 3B. You will see here,**
:13:32 **that is the preamble. That is the exemplar preamble. The**
:13:36 **first two bits per symbol are induced by db's, or decibels.**
:13:42 **It is only the first two symbols. And it is exactly what**
:13:45 **the patent says, boost the energy of the first two symbols.**
:13:48 **That's what we mean by delimiting it from silence.**
:13:56 **Rembrandt argues, and they argue in their brief**
:14:00 **and they just argued now, that the patent actually discloses**
:14:03 **two ways to delimit the preamble from silence. And that's**
:14:07 **actually mistaken. What they say in their brief, and they**
:14:09 **repeated it now in the argument, a message preamble may be**
:14:13 **further distinguished from silence by making the beginning**
:14:15 **more noticeable, that is, increasing the energy of the first**
:14:19 **symbol -- actually, the one up is what we want. One reason**
:14:23 **for the invention's effectiveness is that the preamble is**
:14:26 **transmitted more clearly -- encoded at a lower**
:14:29 **bit-per-symbol rate.**
:14:33 **Then they say, it may be further distinguished**
:14:35 **from silence by boosting energy.**
:14:37 **So they are arguing in the brief that the patent**
:14:39 **discloses two ways to delimit from silence. One is to speak**
:14:43 **more slowly. And counsel gave the analogy of his mother**

talking to him in a stern, slow voice, and saying doesn't that delimit. That is not what the patent is talking about. The patent is talking about delimiting is when you increase the energy of the first symbol. The patent does talk about slowing down, but it talks about slowing down so that you don't make errors. And you can see. In Slide 12, there is error-free coding and there is delimiting. Two separate concepts.

So blow up the first one. There we go. "For purposes of illustration only, the symbols that encode the bits in the preamble 40 shown in Figure 3A are encoded at a rate of two bits per symbol."

That's slower.

"However, any number of bits per symbol lower than that of the normally transmitted data rate can be used so long as the symbol rate allows a receiving device to more reliably decode those symbols."

It's a different concept. "...thereby allowing the symbols that are encoded at the lower rate of two bits per symbol to be very robustly and reliably decoded by a receiving device." So that the chance that it will always be received error-free is greatly increased.

So the concept here in the patent, there is two concepts disclosed. One is, how do we make sure the preamble is going to be received error-free? And that's by

slowing down. So counsel's analogy about my mother saying, hey, Mister, you are in trouble, talking slowly and clearly, that is so you hear the message and you don't make any errors in understanding the message. That is very different from raising your voice, which delimits from silence, which is the second thing the patent talks about.

So we pull out and we look at delimiting is talking about raising your voice. It is talking about, "In accordance with another aspect of the invention, the first symbol 55 representing the first bits in the preamble 40 can be sent using an increased power level, thereby clearly and robustly delimiting the beginning of the communication."

So you have got two concepts. You want it error-free, slow down for that preamble. You want to distinguish it from silence, raise the energy of the first two bits. That's what the patent teaches. In fact, counsel showed you this abstract. The abstract says exactly that.

It says, "The lower rate symbols of the preamble significantly increase the probability that the decoder will decode the preamble symbols error-free." It doesn't talk about delimiting when you are talking about slowing down.

Then the second concept, "The first symbol of the preamble can be transmitted at a lower symbol rate and at an increased power level, thereby clearly and reliably delimiting the beginning of the transmission."

:17:30 **So when you look at what the patent is talking**
:17:32 **about, it is talking about boosting the power for**
:17:35 **delimiting, slowing down to be error-free.**
:17:39 **The second difference between the two**
:17:41 **constructions, two proposed constructions, is counsel for**
:17:45 **Rembrandt argues that the preamble doesn't do anything about**
:17:48 **the end. And that is just clearly contrary to what is in**
:17:52 **the specification. If you look at Slide 13, in the**
:17:56 **background of the invention, "It is also desirable to have**
:17:59 **the ability to precisely delimit the beginning and end of a**
:18:05 **transmission to within one transmitted symbol interval."**
:18:08 **"Likewise, robustly delimiting the end of a**
:18:12 **message enables a receiving transceiver to reliably decode**
:18:16 **the entire message through the final symbol."**
:18:19 **Summary of the invention, Column 2: "The**
:18:22 **invention provides a method and system for transmission of a**
:18:25 **message preamble in which the transmission of the preamble**
:18:28 **is more robust than the data. In this manner, the beginning**
:18:31 **and end of a transmission can be robustly delimited."**
:18:35 **The invention here is, you have got -- you want**
:18:38 **the receiver to know, okay, we are no longer silent. So we**
:18:42 **are going to boost the first symbol, and we are going to**
:18:44 **tell you we are going to delimit not only the front but the**
:18:48 **end sound when it is stopping as well. That is what the**
:18:50 **invention is.**

:18:52 **Rembrandt argues in their brief, this is from**
:18:54 **Page 16 of their brief: "But nothing in the '444 patent**
:18:58 **teaches or in any way suggests that the preamble contains**
:19:01 **any information about the end of the message."**
:19:03 **That is just flat-out wrong, and I just showed**
:19:06 **you the quotes. And the specification teaches the opposite.**
:19:09 **There we see it again here on Slide 15.**
:19:13 **"The format bits 66...the receiver uses this**
:19:17 **information in conjunction with the transmit rate from bits**
:19:20 **62 to identify the special symbols at the start of each ATM**
:19:25 **cell and to determine the symbol that is the last in the**
:19:28 **message."**
:19:30 **Clearly, the preamble delimits the front and it**
:19:33 **delimits the back. It's all through the specification. And**
:19:37 **Rembrandt's argument in their brief is wrong and counsel's**
:19:40 **argument that he just made a few minutes ago is wrong.**
:19:43 **So if you look at the competing constructions,**
:19:46 **Rembrandt's construction simply repeats the words in the**
:19:49 **disputed claim language, giving it no definition to what it**
:19:53 **means to delimit, and no definition to what the other uses**
:19:57 **are for the preamble. And the jury is going to need that.**
:20:00 **This is not technology the jury is going to understand.**
:20:02 **If you look at our proposed construction, it's**
:20:04 **exactly what this patent is about. The preamble includes a**
:20:09 **first symbol transmitted at a power level higher than all**

:20:12 other preamble symbols to precisely identify the beginning
:20:15 of the message and communication link control information
:20:18 used to precisely identify the end of the message.
:20:20 That is exactly what this patent does. And it's
:20:23 exactly what that claim term means, the preamble operating
:20:27 to frame the message and to delimit the message from
:20:31 silence.
:20:32 So the next term behind Tab 2 at Slide 17 is "a
:20:37 plurality of bits representing control link information, or
:20:43 CLCI, communication control link information, and related
:20:47 terms.
:20:47 We can see that in Claim 1. It is in the other
:20:50 independent claim as well.
:20:52 Then we can see the competing construction.
:20:56 Now, here, again, just like with the last term, Rembrandt
:20:59 just parrots the claim language. But in this particular
:21:02 case, they actually make it a little broader than the claim
:21:05 language. So again, they call it plain meaning. But if you
:21:08 look at what they actually write, they say, in the first
:21:11 construction, "multiple bits used to convey communication
:21:17 link control information."
:21:18 In the second one, "A programmable pattern of
:21:20 bits to convey information regarding the communication."
:21:23 "Regarding the communication." What does that
:21:25 even mean? The claim term we are supposed to be

:21:28 **interpreting is communication link control information.**
:21:31 **They have dropped the entire concept of control from their**
:21:35 **proposed definition. They are trying to broaden it out**
:21:37 **again. It is supposed to be information that controls the**
:21:41 **link. And if you look at theirs, all they are saying is it**
:21:44 **conveys information about the link. It is clearly wrong,**
:21:47 **the Rembrandt proposal, when you look at the specification,**
:21:50 **because there is something called an administrative header**
:21:52 **42, which the patent tells us at Column 6, the**
:21:56 **administrative header 42 is optional and can be used to send**
:21:59 **information that is neither part of the preamble 40 or of**
:22:03 **any data to follow.**
:22:05 **Yet if you look at Rembrandt's proposed**
:22:08 **construction of control link information, which is in the**
:22:10 **preamble, it would sweep in administrative header 42 -- go**
:22:14 **back one slide, please -- because they say it is a**
:22:17 **programmable pattern of bits to convey information regarding**
:22:21 **the channel, which the administrative header would do, which**
:22:23 **the patent tells us clearly is not part of the communication**
:22:26 **link control information.**
:22:28 **So you can clearly see in that example, by**
:22:30 **changing the term to get rid of the "control information"**
:22:34 **words in Rembrandt's proposal, they are broadening out the**
:22:37 **claim to cover something the specification clearly tells us**
:22:40 **is not covered.**

:22:42 **What is this control information? Slide 21,**
:22:45 **please. The patent tells us very clearly what the control**
:22:48 **information is. We see here in Claim 9, at Line 36, "The**
:22:54 **bit stream preamble 40 comprises four bits 62 that include**
:22:59 **information regarding the transmit rate, four bits 63 that**
:23:04 **include information regarding the rate also in bits per**
:23:07 **symbol that the receiver is capable of receiving, two bits**
:23:11 **64 that identify the address," then there is two bits 64**
:23:14 **that represent the address of the remote DSL transceiver,**
:23:19 **and two bits 66 which can be used to communicate the format.**
:23:22 **This is control information. It talks about the**
:23:23 **transmit rate. It talks about the rate capable of**
:23:26 **receiving. It talks about the address. It talks about the**
:23:28 **format.**
:23:28 **These are things that control the link. And**
:23:30 **that's what this term is meant to include.**
:23:33 **You look at Slide 22, you can see right from the**
:23:37 **Figure 3B, transmit rate, receive rate, address, format, are**
:23:42 **the kinds of things that control link information is.**
:23:45 **Now, our construction, counsel accused our**
:23:48 **construction of trying to read in all of Figure 3B and**
:23:52 **Figure 3B just being an exemplar. That is not what our**
:23:55 **construction does. Our construction doesn't say each one of**
:23:57 **those has to be two bits and it has to be set up in this**
:24:02 **fashion. Our construction merely says control link**

:24:04 **information merely is transmit rate, receive rate, address,**
:24:07 **formatting, and things of that nature, which is what we are**
:24:09 **supposed to be interpreting, what is control link**
:24:13 **information, because the jury is not going to have any idea**
:24:15 **what control link information is and we need to tell them**
:24:19 **what it is. And the patent tells us quite clearly what it**
:24:21 **is.**

:24:24 **If we jump to Slide 24, we can see, it's clearly**
:24:29 **described in the preamble, these things that we just talked**
:24:32 **about, message format, remote address, receive rate,**
:24:37 **transmit rate. All of these things there is no doubt is**
:24:41 **control link information.**

:24:43 **If we go back to the competing instructions and**
:24:44 **you look at our instruction, it says a -- the term is "a**
:24:48 **plurality of bits representing communication link control**
:24:53 **information," and our proposal is, "transmit rate bits,**
:24:56 **maximum receive rate bits, address bits where there is more**
:25:00 **than one remote, and message format bits decoded by the**
:25:03 **receiver to control communications over the link."**

:25:05 **It is not limiting. We don't say how many bits.**
:25:07 **We don't say it has to be two bits, two bits, two bits, like**
:25:11 **it says in Figure 3. We are not reading the preferred**
:25:13 **embodiment into the claim. We are instead just defining**
:25:15 **what does it mean to be a communication link control**
:25:18 **information, which is something the jury is going to need**

help with.

Then we get to the means-plus-function claim --

THE COURT: In this one what I need to hear from you about, on the next one, is structure.

MR. DESMARAIS: Yes. So let's go to Tab 3.

THE COURT: I need you to tell me why you disagree with the Court and counsel's formulation.

MR. DESMARAIS: Before I jump to structure, let me just make one comment. Rembrandt's proposed function truncates the claim language.

THE COURT: I don't need to hear about function.

MR. DESMARAIS: If you look at the structure, there is a -- first of all, there is a typographical error in our chart that I want to point out. I think our chart said 205. It was supposed to be 206. I have changed it on this chart. 206 is the right number, not 205.

So there are the competing structures. If you look at Rembrandt's proposal, they are saying Figure 8, elements 224 and 236. If you look at the chart, they are saying it's just this sequencer, and 224, the multiplexer here. But the function is getting the preamble to the link.

Rembrandt might be correct if the preamble was sitting here in the sequencer.

THE COURT: Let's assume for purposes of this discussion that I agree with the plaintiff insofar as its

:26:54 **description of function. Let's assume that. And that is**
:26:58 **applying the preamble to a communication message.**
:27:01 **MR. DESMARAIS: Okay. Even with that, they are**
:27:04 **totally wrong. Here is why. They would be right if, on the**
:27:08 **structure, if the preamble was sitting here in the**
:27:11 **sequencer. So in a previous step, this circuit assembled**
:27:14 **the preamble and it was residing in a memory here or it was**
:27:18 **residing in 224. Then to carry out the function, then, you**
:27:22 **would just send the preamble onto the link. You would apply**
:27:24 **the preamble onto the link.**
:27:26 **THE COURT: So what structure do you propose?**
:27:30 **MR. DESMARAIS: Let me show you how it works.**
:27:32 **Each piece of the preamble is residing here in these yellow**
:27:36 **boxes. It is not assembled at the point you apply it to the**
:27:39 **link.**
:27:40 **We see that here on Slide 31.**
:27:42 **Put up Slide 31, please.**
:27:47 **Slide 31 is the description in Column 15. The**
:27:51 **sequencer has to assemble the preamble. So if you look, it**
:27:55 **says here at Column 15, Line 4, "Figure 8 is a block diagram**
:28:00 **illustrating the encoder 200 of Figure 7. The transmit**
:28:04 **sequencer 236 commands the multiplexer 214 via connection**
:28:10 **242 to select the first two bits of the four bits that**
:28:15 **define the current transmit rate from transmit rate element**
:28:20 **206."**

:28:21 **So what happened? Just take a step back and**
:28:24 **look at the figure.**
:28:25 **So the first thing that happens when we want to**
:28:27 **get that preamble onto the line, the sequencer has to go get**
:28:31 **the transmit rate and then has to instruct the transmit rate**
:28:36 **to go through this multiplexer and then get over to the**
:28:40 **other 224 multiplexer to get out onto the line.**
:28:44 **They are proceeding under the assumption that**
:28:45 **somebody has already assembled the preamble and it hasn't**
:28:48 **happened yet.**
:28:50 **We are back to Slide 31. The first thing you do**
:28:53 **is transmit. Then the next thing you do, "The next two bits**
:28:57 **of the transmit rate 62 are then scrambled and encoded in**
:28:59 **the same way." Next, the transmit sequencer 236 commands**
:29:02 **the multiplexer 214 via connection 242 to select the four**
:29:06 **bits representing the requested receive rate from receive**
:29:10 **element 204."**
:29:11 **If you go back to Figure 8, the transmit**
:29:14 **sequencer first goes to the multiplexer and gets the**
:29:17 **transmit rate into the multiplexer out on the line.**
:29:21 **Second step, it goes to the receive rate. It is**
:29:24 **out on the multiplexer, but out on the line.**
:29:28 **Slowly, it builds the preamble line. So if we**
:29:34 **got to Slide 32, what happens next? "If these are multiple**
:29:38 **remote DSL transceivers 150 and 155, then the transmit**

:29:42 **sequencer 236 commands the multiplexer 214 via connection**
:29:47 **242 to select the two bits representing the remote address**
:29:50 **from the remote address element 202."**

:29:53 **If we go back to Figure 6, it first gets the**
:29:56 **transmit rate, then it gets the receive rate, then it goes**
:29:58 **and gets the remote address, puts it on the multiplexer and**
:30:02 **sends it out.**

:30:02 **The last step, "Transmit sequencer 236 senses if**
:30:08 **an administrative header 42 and/or ATM cells," blah, blah,**
:30:11 **blah, blah, blah, "via connections 232 and 234,**
:30:15 **respectively, and uses this information to prepare the**
:30:17 **message format indicator which is loaded by the transmit**
:30:20 **sequencer 236 via connection 207," which is the last step.**
:30:25 **It goes up, gets the message format, puts it on the**
:30:28 **multiplexer to put it out on the line. Rembrandt**
:30:33 **misunderstands how the invention is described structurally.**
:30:33 **They are assuming the transmit sequencer has the preamble.**
:30:37 **That is not what happens. What happens is the transmit**
:30:40 **sequencer has to go build the preamble to put it on the**
:30:42 **line.**

:30:45 **THE COURT: I got that point. I would like to**
:30:47 **hear a response.**

:30:48 **MR. ROZENDAAL: I guess we have a difference of**
:30:51 **opinion about -- the preamble is going to -- it ought to**
:30:56 **become apparent that the preamble is going to get attached**

:30:58 **to the message by this multiplexer 224. The multiplexer 224**
:31:02 **is going to get it by selecting inputs either 226 or the**
:31:07 **228, which are going to come from the preamble encoder.**
:31:10 **Whatever gets puts into the preamble encoder is going to be**
:31:13 **the preamble that ends up put in front of the message. All**
:31:17 **of these particular elements here are just different ways of**
:31:23 **potentially building up a preamble.**
:31:24 **But the attaching the preamble, which is the**
:31:26 **only function of interest, is done by this multiplexer**
:31:30 **selecting inputs, selecting one of these two inputs here.**
:31:32 **THE COURT: Are you making an assumption that**
:31:36 **you shouldn't be making, as argued by Mr. Desmarais?**
:31:40 **MR. ROZENDAAL: I don't think so, Your Honor,**
:31:41 **because the function is not assembling the preamble or**
:31:47 **creating the preamble. It is just putting the preamble on**
:31:50 **the front of the message. And basically, if this**
:31:53 **multiplexer 224 selects inputs 257 or 256 here at the**
:32:00 **bottom, it is going to be sending the message body. If it**
:32:03 **selects inputs 226 or 228, it's going to be sending the**
:32:07 **preamble.**
:32:07 **So by picking between those inputs, that's what**
:32:10 **attaches the preamble.**
:32:11 **THE COURT: I understand the parties 'positions.**
:32:13 **Let's go on to the next, Mr. Desmarais.**
:32:15 **MR. DESMARAIS: Yes, Your Honor. That is all I**

:32:17 **intended to cover on this patent. Unless you have**
:32:20 **questions, I can jump to the other issues.**
:32:22 **THE COURT: You didn't want to talk about an**
:32:24 **encoder included to encode -- I wanted to find out if you**
:32:30 **agreed with my discussion --**
:32:32 **MR. DESMARAIS: I thought your proposal was**
:32:34 **acceptable.**
:32:34 **THE COURT: That is fine.**
:32:36 **MR. DESMARAIS: I should have told you that. I**
:32:38 **am sorry.**
:32:39 **THE COURT: That's okay.**
:32:41 **All right. Anything else?**
:32:44 **MR. ROZENDAAL: A brief couple points.**
:33:15 **First of all, on the notion of delimiting from**
:33:18 **silence, two points. First of all, the patent does indicate**
:33:26 **two ways of delimiting the message from silence. We see**
:33:28 **that in the abstract in the part highlighted actually by Mr.**
:33:33 **Desmarais, it says, "The first symbol of the preamble can be**
:33:38 **transmitted at the lower symbol rate and at an increased**
:33:43 **power level, thereby delimiting from silence."**
:33:47 **Delimiting from silence means, remember this,**
:33:51 **letting the modem distinguish that a message is beginning.**
:33:55 **So clearly, Mr. Desmarais tried to draw a distinction that**
:33:58 **is not there between clearly and correctly receiving the**
:34:02 **preamble and delimiting from silence.**

:34:05 **If the modem has clearly and correctly received the preamble, and recognizes that a message is beginning because it has received the preamble, then it has delimited the message from silence.**

:34:15 **So there is no distinction there. They are two sides of the same coin.**

:34:22 **Second, the claim differentiation point is one Mr. Desmarais failed to address. There are specific claims, 24 and 35, that talk about boosting the signal power of the first symbol. Those claims would be meaningless if claims from which they depended already had that boosting requirement.**

:34:43 **Similarly, with regard to beginning and end, we have a similar argument. It is true, as Mr. Desmarais said, the invention can be used to delimit the beginning and end of a transmission. And some of the claims are directed to delimiting the beginning and some are directed to delimiting the end. And we haven't asserted the ones that are directed to delimiting the end. Those are Nos. 11 and 22.**

:35:10 **And, by the way, one of the reasons that you can tell that we are talking about the beginning is it's called a preamble. The preamble is what comes before the message. The way that the message delimits the end is not by using the preamble. What the invention teaches for delimiting the end is something different. This can be seen at Column 8,**

:35:40 **Lines approximately 24 to 28 or so, which is not coming into**
:35:48 **focus very well. There we go.**
:35:51 **And what it says is that there is an extra bit,**
:35:57 **which is identified as 54 or 61, indicating whether or not**
:36:01 **the cell just started is the last cell of the transmission.**
:36:06 **We can see this illustrated in Figure 3A. What the patent**
:36:18 **does is, if cell 45 here is going to be the last cell of the**
:36:25 **transmission, it will add this extra bit 61 right here to**
:36:30 **the beginning of that cell, letting the system know that**
:36:33 **this is going to be the last cell. And that's how it**
:36:36 **delimits the end. That is not in the preamble at all.**
:36:41 **Finally, with regard to communications link**
:36:43 **control information, there was a, I thought, a telling**
:36:49 **moment in Mr. Desmarais's presentation when he said, well,**
:36:53 **you know, we are not really saying it just has to be what is**
:36:56 **in 3B. We are just saying that control link information is**
:37:00 **transmit rate and receive rate and things of that nature.**
:37:05 **Well, our point is it is not just limited to the**
:37:08 **specific things that are listed there. It could be any kind**
:37:10 **of information relevant to controlling the communication and**
:37:13 **their attempt to limit it by the specific example in the**
:37:16 **specification is a classic example of importing limitations**
:37:19 **that don't belong there.**
:37:22 **MR. DESMARAIS: May I make one point, Your**
:37:24 **Honor?**

:37:24 **THE COURT: I really do think I understand the**
:37:26 **parties' positions.**
:37:29 **So that leaves us with the '627. Right? Other**
:37:32 **than the fact that Mr. Reines isn't here, is there any**
:37:36 **reason we can't go forward?**
:37:38 **(Laughter.)**
:37:43 **MR. DESMARAIS: I think he was here. I think he**
:37:46 **just ran out.**
:37:48 **MR. SEITZ: Your Honor, I understand the need.**
:37:51 **I think the problem from our side is, because a separate day**
:37:54 **was set aside --**
:37:56 **THE COURT: I did that.**
:37:57 **MR. SEITZ: Not casting any blame on the Court,**
:38:00 **but our side, I think, from a preparatory standpoint**
:38:03 **probably needs --**
:38:05 **MR. BLUMENFELD: We are in the same position.**
:38:07 **An hour wasn't going to get it done anyway.**
:38:11 **THE COURT: We will reconvene at 9:30.**
:38:14 **MR. SEITZ: Could I just offer a parting gift to**
:38:17 **the Court?**
:38:18 **THE COURT: Is that your slides?**
:38:20 **MR. SEITZ: This is a CD, one for you and your**
:38:24 **clerk, for those nights when you can't sleep.**
:38:27 **THE COURT: How much time, Mr. Blumenfeld and**
:38:33 **Mr. Seitz, do you think we are going to need tomorrow?**

:38:38 **MR. SWEENEY: Your Honor, I think you have**
:38:39 **allowed three hours for each side, but I do not think it is**
:38:43 **going to take that long.**
:38:44 **THE COURT: I am going to amend that. I am not**
:38:46 **giving the three hours a side, not on this patent.**
:38:49 **MR. SWEENEY: We will work within whatever time**
:38:51 **frame you give us.**
:38:52 **THE COURT: What do you think you need?**
:38:54 **MR. BLUMENFELD: We anticipated less than two**
:38:56 **hours but close to two hours for our side.**
:39:00 **MR. SWEENEY: I think that would be fine for us.**
:39:03 **THE COURT: We can do that.**
:39:09 **MR. DESMARAIS: May I ask a question, Your**
:39:10 **Honor?**
:39:11 **THE COURT: Yes, sir.**
:39:12 **MR. DESMARAIS: I am not involved with the '627.**
:39:14 **I am assuming you are not expecting me to be here?**
:39:17 **THE COURT: Unless you want to come and watch**
:39:20 **paint dry. I don't mean to be mean.**
:39:27 **I would just offer this invitation. If there**
:39:30 **are any issues, since you are all here, that you want to**
:39:34 **discuss with me tomorrow, we can do that.**
:39:39 **MR. SEITZ: I think there may be an opportunity**
:39:41 **to do that, Your Honor. We are still at an impasse on a**
:39:44 **couple of protective order issues. Obviously, we are eager**

:39:47 to get one put in place. So I think Mr. Desmarais and I
:39:50 have agreed, even though he is not going to be here,
:39:54 hopefully somebody can handle that.
:39:55 MR. DESMARAIS: Were you saying we should talk
:39:57 about them now?
:39:58 THE COURT: Tomorrow, if there are matters that
:39:59 are ripe that you have discussed.
:40:05 MR. DESMARAIS: I think the only issue is the
:40:06 protective order issue. The Kirkland team wasn't planning
:40:09 to be here tomorrow. I think we can discuss it in five
:40:12 minutes if you had five minutes.
:40:14 MR. SEITZ: I don't have the competing proposals
:40:16 in my hand right now. I think the two issues are access in
:40:22 house, and there was another one, too, and the patent
:40:26 prosecution bar. I think those were the two.
:40:29 I don't want to keep anyone over from the
:40:31 Kirkland team to do that. But we do urgently need to get a
:40:36 protective order in place.
:40:38 The last time we raised this with the Court, you
:40:40 were so darned busy, you said, don't bother me until August.
:40:45 The proposal we had made earlier was five-page letters with
:40:49 competing proposals and just let you decide it, if that
:40:51 works for you, or we would pick a time sometime soon, maybe,
:40:56 to get a telephone confrontation. Whatever the Court thinks
:40:58 could help us resolve this.

:41:00 **I think we both agree, we are at an impasse and**
:41:04 **we just need you to decide it.**
:41:05 **THE COURT: Again, the issues are, Mr. Seitz?**
:41:07 **MR. SEITZ: The scope of the patent prosecution**
:41:10 **bar is the first one. And the second issue.**
:41:15 **MR. LAMISON: Inside access to highly**
:41:18 **confidential information.**
:41:21 **MR. SEITZ: Who gets access to confidential and**
:41:25 **highly confidential information. We had made a proposal**
:41:27 **early on. In Texas, with some of the defendants, there was**
:41:29 **already a protective order agreed to. Our proposal was,**
:41:33 **hey, let's just say, you know, Comcast, they have already**
:41:37 **agreed to this. Let's just take the Texas order.**
:41:40 **Obviously, the counsel names need to be switched around a**
:41:43 **little bit. Let's use that and call it a day.**
:41:45 **THE COURT: What was the difficulty with that?**
:41:47 **MR. LAMISON: The equipment vendors were not**
:41:49 **parties to that case, and that type of information is**
:41:52 **different, and they would like to have additional**
:41:54 **protections. So we were meeting, conferring, having a meet-**
:41:57 **and-confer over those requests. One of the issues is**
:42:01 **in-house access. The Texas protective order does not**
:42:03 **provide the type of protection that we need for our highly**
:42:06 **sensitive information.**
:42:08 **THE COURT: Have you completed your**

:42:11 **meet-and-confer?**

:42:12 **MR. LAMISON: Not entirely, Your Honor. There**
:42:14 **is some information that we have asked for and if provided**
:42:19 **would help us.**

:42:20 **THE COURT: Mr. Blumenfeld.**

:42:25 **MR. BLUMENFELD: Mr. Lamison and Mr. Shaw and I**
:42:27 **have been the negotiators on our side. I also represent**
:42:30 **some of the networks who also had some problems. The way**
:42:34 **things were left was that the last communication I saw, at**
:42:38 **least, was that we offered to have another meet-and-confer**
:42:41 **either tomorrow or Friday. The process is continuing. As I**
:42:45 **said, the networks do still have some issues, also.**

:42:48 **THE COURT: Let's allow that process, the**
:42:50 **meet-and-confer process, to work its way forward.**

:42:54 **MR. SEITZ: It's been working out a long time.**

:42:56 **THE COURT: I am not going to get involved until**
:42:58 **it is completed. It seems like you are talking. That is, I**
:43:02 **think, preferable to the Court having to get involved and**
:43:05 **decide the issue at this stage.**

:43:06 **MR. SEITZ: In the event we are unable to**
:43:09 **agree --**

:43:10 **THE COURT: In that event, you should notify**
:43:12 **chambers, and I am trying not to be around here as much as**
:43:16 **possible for the next, for a little bit of time. I am not**
:43:20 **going to say how long. But I would make myself available**

:43:26 **for a teleconference.**

:43:29 **MR. SEITZ: Thank you very much, Your Honor,**
:43:31 **because it is an issue of some importance that is holding up**
:43:34 **some discovery, frankly. We appreciate the Court making**
:43:38 **itself available.**

:43:38 **THE COURT: If there are any other issues**
:43:42 **percolating that you think, given that we have many counsel**
:43:48 **here, that might be better addressed in person, or**
:43:54 **efficiently addressed in person, we can do that tomorrow.**

:43:57 **MR. SEITZ: Thank you very much, Your Honor, for**
:43:59 **your attention today.**

:43:59 **THE COURT: Thank you. We are adjourned**

:44:01 **(Court recessed at 3:45 p.m.)**

:44:01 **- - -**

:44:01 **Reporter: Kevin Maurer**